IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF IOWA
WESTERN DIVISION

DAVID and BARBARA STULTS,

Plaintiffs,

vs.

INTERNATIONAL FLAVORS AND FRAGRANCES, INC., and BUSH BOAKE ALLEN, INC.,

Defendants.
_____/

No. C11-4077-MWB

Sioux City, Iowa
August 14, 2014
7:58 a.m.

Volume 4 of 7

TRANSCRIPT OF TRIAL
BEFORE THE HONORABLE MARK W. BENNETT
UNITED STATES DISTRICT JUDGE, and a jury.

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(Proceedings reconvened outside the presence of the jury.)

THE COURT: Okay. Let's go on the record now. I want to raise an important issue. In trials of a week or longer, I always bake cookies for the jurors. I always ask the parties if they have any objection. I did have a party object one time that I was trying to curry favor with the jury or something. I made them anyway over their objection because I've never checked whether people appeal my rulings. I don't know if it was alleged error on appeal, but at least the circuit never addressed it.

So anybody have any objection if I bake cookies Sunday night for the jurors?

MR. MCCLAIN: No, Your Honor.

MR. GUNN: No.

THE COURT: Okay. And if they're good, I'll say actually the plaintiffs baked them, and if they come out crappy, I'll say Mr. Gunn made them for them. How's that? Just to be fair; right?

MR. GUNN: Sure.

THE COURT: Okay. Are there any matters that we want to take up this morning? I think we have the issue of the video?

MR. GUNN: We -- you know, I apologize. I got us here probably unnecessarily early because we anticipated an issue

about the use of interrogatory responses and the complaint. And I think we have worked that out.

THE COURT: Okay.

MR. GUNN: If things go as expected. If for some reason we don't, then we're going to have an issue but . . .

THE COURT: Do we have an issue on that?

MR. MCCLAIN: No. Mr. Gunn has explained what he wants to do which is to say without reference to the pleading, you know, you've contended thus and so, and I said I don't find anything objectionable about that, and so if that's the way he wants to proceed, we don't need to worry about anything else. So he's explained --

THE COURT: But are you going to be asking about claims that I've dismissed?

MR. GUNN: Well, I'm not going to be asking about claims. I'm going to say this is your history of consumption as revealed in his interrogatory responses. I expect he's going to say yes. If he says no, then we're going to pull out the interrogatories and say, well, previously you swore to this.

THE COURT: Oh, yeah, that's no problem. You can always do that. Yeah, you can impeach them with their own interrogatory answers, sure.

MR. GUNN: And then in the complaint he alleges that all those people sold in effect an unreasonably dangerous product, and I'm going to say you still believe that, and if he

says no, then we're going to have to get into things. If he says yes, then we're done.

THE COURT: And if he says no, when you say we're going to have to get into things, what does that involve?

MR. GUNN: Then I'm going to say, well, you sued them.

THE COURT: Oh, that's fine. Yeah. That's fine. I don't have any problem with that. I don't want you to get into, well, you pled this theory and it's no longer in the case.

MR. GUNN: I'm not going to talk about pleadings --

THE COURT: Yeah. Fine. No.

MR. GUNN: -- unless I have to.

THE COURT: Right. But in terms of who got sued in the case, that's --

MR. GUNN: I'm not going to say who got sued.

THE COURT: Oh.

MR. GUNN: I'm just going to say you have suggested in the past and I assume you agree today that all these people sold you bad product.

THE COURT: Yeah. You don't have any objection to that.

MR. MCCLAIN: No, as long as that's as far as it goes --

THE COURT: Yep. And if it goes beyond that and there's an objection, we'll deal with it.

What's next?

MR. GUNN: The next is the video, and Mr. Hill is prepared to address that.

THE COURT: Okay.

MR. GUNN: And I think we filed a brief.

THE COURT: Yep, and I've read it.

Mr. Hill?

MR. HILL: Thank you, Your Honor. We did file a motion in limine on this topic this morning. I've also provided to your clerk this morning a copy of Dr. Pue's report, expert disclosure in this case. It obviously relates directly to the issue before the Court.

For procedural purposes to explain the background, yesterday at the --

THE COURT: I understand the background, but if you want to make your record, go ahead.

MR. HILL: Well, sure. I'd just simply point out briefly that we were not aware of the plaintiffs' intention to use a video for demonstrative purposes to illustrate a lung transplant procedure until the end of the day in court yesterday. That's the first time it has ever been disclosed to us that there was that intention by the plaintiff to do that.

THE COURT: Okay. Well, let me stop you right there, Mr. Hill. What's your position as to why it needed to be disclosed earlier?

MR. HILL: My position, Your Honor, is that

demonstrative evidence which either summarizes or supports an expert's opinion must be disclosed in the expert's report, and it must obviously relate to an opinion that the expert has actually disclosed that he is going to render at trial. And in this instance this demonstrative meets neither of those qualifications.

And if you look at Dr. Pue's report, you will see on the -- I believe it's the fifth page -- and I've highlighted for Your Honor the one sentence where Dr. Pue says anything about a lung transplant or that issue, and it's under paragraph 6 under recommendations. And it simply reads, "I anticipate the patient will need lung transplant evaluation over the next two years."

That is the entirety of the discussion by Dr. Pue in his disclosure regarding the issue of lung transplants. He does not disclose anywhere in this disclosure or in his deposition testimony that he intends to provide any testimony regarding how that procedure would take place if down the road it was necessary.

So in this instance the demonstrative evidence not only was not identified in his expert disclosure, but the topic that this demonstrative goes to address was never disclosed in his disclosure. And it was not disclosed in his deposition. We have not had a chance to cross-examine Dr. Pue about this issue because he's never told us that he intends to give this type of opinion. And clearly Your Honor has -- you've recognized this

issue before in --

THE COURT: I have in the Kawasaki case.

MR. HILL: That's right. And in that case I think you recognized and quoted that all parties and the Court should possess full information well in advance of trial on any proposed expert testimony or demonstrative evidence citing to Rule 26(a)(2)(B).

And in this instance we have no advance notice ahead of trial as required by the rule that Dr. Pue had any intention even to talk about this topic much less use a demonstrative aid of this prejudicial nature to show to the jury.

If --

THE COURT: Yeah, I understand your argument.

MR. HILL: Okay.

THE COURT: You really have anything else you need to add to it?

MR. HILL: Well, I do have a couple minor follow-ups if I could, Your Honor.

THE COURT: Okay. Go ahead.

MR. HILL: I'll be as brief as possible. Even if we ignore the failure to disclose these opinions and the fact that Dr. Pue has never indicated he's going to talk on this subject, what the video proposes to show is the procedure under which or at the time that this happens for Dr. -- I mean, excuse me, for Mr. Stults if it does happen is a procedure where he will be

under anesthesia the entire time this procedure takes place. He will not consciously undergo or appreciate anything that's shown in the video so --

THE COURT: Well, that's not true. The procedure's going to be explained to him. Any reasonable patient would probably look at a YouTube video to see what the procedure involves. So I realize he's going to be under sedation. But to say he doesn't appreciate the significance of the surgery or whatever it is you said, that's really -- that's Alice in Wonderland thinking.

MR. HILL: Well, Your Honor, I was not arguing that he would not appreciate ahead of time --

THE COURT: Well, so what's your point?

MR. HILL: My point is that --

THE COURT: Your point is he's going to be under anesthesia. And you can ask the doctor about that if I let it in.

MR. HILL: My point, Your Honor, is that --

THE COURT: And every juror's going to know he's under anesthesia.

MR. HILL: Right. My point, Your Honor, is it doesn't go to prove or disprove any fact in the case. The issue here is whether he's going to need the lung transplant.

THE COURT: But if he does need it, it goes to show what it is that he would have happen to him, and that certainly

is relevant. Now, I think your real question is -- and what I'm curious about -- has anybody already testified that he's going to need a lung transplant?

MR. MCCLAIN: Yes. In fact, we read Dr. Switzer's testimony to Ms. Allison yesterday. Dr. Parmet said that -- or Dr. Egilman said that as well. So yes, that's already occurred.

THE COURT: And what about this doctor? Is he going to opine -- I mean, his report was -- is three years old.

MR. MCCLAIN: Yes.

THE COURT: More than three years old.

MR. MCCLAIN: And his deposition testimony --

THE COURT: What'd he say in his dep?

MR. MCCLAIN: Let us find that.

THE COURT: I mean, I would understand the defense argument if nobody said he needed a lung transplant.

MR. MCCLAIN: Right. But there's at least three doctors saying it. Pue said initially that I think he's going to need evaluation within two or three years, and then they explained what evaluation meant, that if he meets the criteria that he'll need the transplant. There's no question he said that. And so now he does meet the criteria. As of now he's declined to the point where he meets the criteria. Egilman's already said it. His treating doctor has said it. And we've used this videotape in every single trial where a lung transplant was at issue.

THE COURT: Yeah. I don't find that persuasive but . . .

MR. MCCLAIN: Well, I understand the Court's position on that except that there's a history in this litigation and we have not exchanged demonstratives on either side --

THE COURT: Right.

MR. MCCLAIN: -- that other -- that we've used in previous cases, and no one has objected a single time to any of those.

THE COURT: So your point is they with reasonable diligence would have known it was coming or something?

MR. MCCLAIN: They have it. They have all of the files from IFF. They've said that. They're completely up on this case because they inherited all of the trials from previous cases and have graciously told me I don't have to produce all that stuff again because I've already produced it.

So the position they've lulled me into was if I produced it in the other cases they have it and they're not going to complain about it later on. So now this is -- I'm really being mousetrapped here.

THE COURT: Hey. Why don't you have another doughnut and sit down. I understand your argument.

MR. HILL: Your Honor, if I could address a couple of those points.

THE COURT: Yes.

MR. HILL: First, the record from Dr. Switzer that Mr. McClain referenced, we've been asking him for weeks to provide us updated medical records from Mr. McClain. He has never disclosed that record to us. Mr. Holcomb can correct me if I'm wrong, but I don't believe those records are part of the admissible evidence in this case.

THE COURT: Yeah, but Dr. -- according to McClain, the doctor said in the deposition that was played that it's more likely than not that he would need a lung transplant.

MR. MCCLAIN: It was Harrison, not Switzer.

MR. HILL: I'm talking about the records he mentioned. He mentioned Dr. Switzer in his argument, so I wanted to make sure it was clear on the record that Dr. --

THE COURT: Yeah. Well, I'm talking about -- let me ask it very specifically. Is there any evidence in the record that someone has testified that Mr. Stults will like -- more likely than not need a lung transplant in the future?

MR. HILL: Yes, Your Honor, there is, but there's also testimony from plaintiffs' own expert, Dr. Parmet, who you heard who disagreed with that opinion that he did not.

THE COURT: I understand that. But that d -- really?

MR. HILL: I just wanted to point it out.

THE COURT: You can't be serious. I understand that. If there's any evidence that it's more likely than not that he would need a lung transplant, even if that's disputed, that's

enough to support playing the video. Now, the question is is the video more prejudicial than probative.

MR. HILL: I would respond real quickly to that previous point, Your Honor.

THE COURT: Yeah.

MR. HILL: They're trying to use the video with this particular witness, and so the issue before the Court is whether it is germane to this witness's testimony, not whether it's germane to testimony given by another witness. It's whether this witness has testified with regard to whether this patient will need a lung transplant and whether that opinion was properly disclosed in his initial disclosure. And it was not as you --

THE COURT: Okay. Then I'll let them show the video after the witness testifies if you're right. Are you serious?

MR. HILL: Your Honor, I thought the issue was whether the demonstrative applied to this expert's testimony because that was --

THE COURT: Whether the demonstrative assists the jury in understanding what's involved in a lung transplant, that's the issue.

MR. GUNN: Your Honor, can I chime in a little bit?

THE COURT: Yeah. I normally don't adopt World Federation of Wrestling tag team rules, but I'll let you tag team here.

MR. GUNN: Okay. Well, I would just --

THE COURT: Can you use a microphone, though, so that everybody can hear you? But before you -- while you're trying to get a microphone, let me ask Mr. McClain something.

What is this doctor going to testify to about a lung transplant? Is he sticking with his original July 27 report that -- on page 5 that I anticipate the patient will need lung transplant evaluation over the next two years, or is he going to go beyond that based on current information?

MR. MCCLAIN: It depends on what you say. He does believe that based on the current status that he needs to be evaluated currently which means that he will then be placed on a lung transplant list based on --

THE COURT: Well, that depends on what the evaluation shows.

MR. MCCLAIN: Well, he says that the cri -- he says the criteria shows that he already meets all the criteria for a transplant now, so it's a matter of submitting him to a center.

THE COURT: Okay. Now, let's back up here. But he didn't say that in his report; correct?

MR. MCCLAIN: No, he did not.

THE COURT: Did he say that in his deposition?

MR. MCCLAIN: Yes, he did.

THE COURT: Or did you supplement -- did you do any supplementation which the lawyers have an ongoing duty to do to

say that now his opinion is he needs it?

MR. MCCLAIN: Other than the deposition, no.

THE COURT: Okay.

MR. MCCLAIN: He testified to it under oath which --

THE COURT: What does he say in the deposition?

MR. MCCLAIN: He says -- the question was --

THE COURT: Page number for opposing counsel.

MR. MCCLAIN: Yes. It's on page 241, and it's, "And at the time you wrote that, you were not --" here's the --

THE COURT: Who's doing the questioning?

MR. MCCLAIN: The defendants.

THE COURT: Someone from your side or the defense?

MR. MCCLAIN: The defendants.

THE COURT: Okay.

MR. MCCLAIN: So do I understand when you wrote that it's anticipated that he would need a lung transplant evaluation by now which he hasn't had, that was based on your opinion that he was going to continue to progress, I guess, negatively the way that he had in a time period before you saw him? That's correct. And that's based on your belief that he had flavor-induced bronchiolitis obliterans. That's correct. And it's based on the limited PFT data that I had at the time I saw him just with the few data points from March 2009, November 2009, July 2011. With more data points, you can give a more accurate prediction of the time course of the progression of the

disease. But I was working with the limited data points, so I had to give my best crystal ball guess for when I thought he would need or require evaluation.

So he was saying -- he was saying at this point in time it had progressed and he needed evaluation. So they're asking him about the time course --

THE COURT: Yeah, but he didn't go on to say that in his opinion he now needs a lung transplant which is what I thought you told me he said in the deposition.

MR. GUNN: He said he just had to guess.

MR. MCCLAIN: Judge, his testimony was that he needs to go into the process to be evaluated. We have other testimony from other witnesses about the necessity for the transplant.

THE COURT: I understand that.

MR. MCCLAIN: All he's going to be describing is the process that's the end point. He doesn't have to express the opinion that he needs a transplant in order to make the video relevant. And the video's relevant by the witness's training, experience, otherwise to explain what a lung transplant is.

Talking about what a lung transplant is lays a sufficient foundation for what we're talking about to show the jury what a lung transplant is. They've already heard he's going to need one. And, therefore, I think that there's a sufficient evidentiary base to show it.

There's no surprise in regard to the video because the

defendants have it and Mr. Gunn agreed that they have it.

MR. GUNN: I did not agree we have it. I said we might. I don't know what's in all those boxes.

MR. MCCLAIN: Well, that's --

MR. GUNN: But if --

MR. HILL: It's never been produced in this case, Your Honor.

THE COURT: They're your boxes.

MR. HILL: I can vouch it's never been produced or shown to us in this case, Your Honor.

MR. MCCLAIN: Do you represent to the Court that you do not have it?

MR. GUNN: I represent that I have no idea.

MR. MCCLAIN: Well, that's not --

MR. GUNN: But I know that I didn't get it in this case.

THE COURT: With all due respect, Mr. Gunn, you're the tip of the iceberg. You're the lead trial lawyer, so I wouldn't expect you to know everything in all those boxes, nor would you ever represent to me that you know everything in all those boxes.

MR. GUNN: I certainly would not.

THE COURT: Right. But your underling -- the other -- the other members of the trial team, excuse me, probably have gone through the boxes.

MR. MCCLAIN: Judge --

MR. GUNN: I can tell you that no member of my trial team has ever seen the video. I'm not --

THE COURT: Right. I appreciate that. But here's the point. They didn't see -- these folks probably didn't see your demonstrative exhibits either like the weekly, w-e-e-k-l-y, demonstrative exhibit because that one stands out. You had no -- you were under no obligation to disclose that demonstrative exhibit. And so they didn't -- they weren't whining about the fact that they didn't get a demonstrative exhibit because they weren't whining about it because there was no duty to disclose it.

MR. GUNN: And I have not whined about --

THE COURT: No, you haven't.

MR. GUNN: But mine represent what's happened in the past. It's a fact, you know.

THE COURT: Well, I understand that.

MR. GUNN: And this represents what --

THE COURT: Something that might happen in the future.

MR. GUNN: -- what may happen in the future.

THE COURT: What may happen in the future. Yeah, and you all can fight all you want, and it's fair game about whether he's going to need a lung transplant or not, and I assume your experts are maybe going to say he doesn't. But there is testimony in the record that he does. So as long as there's

testimony in the record that he does and this would assist the jury in understanding what a lung transplant involves if -- if he actually has one, I don't see the problem with it.

MR. GUNN: Well, let me just make this point.

THE COURT: Yes.

MR. GUNN: I don't know what year that procedure was videotaped or whatever it was. Clearly it's a couple years old, several years old.

THE COURT: And the weight to be given it, if any -- and you can cross-examine the doctor on the fact that, hey, now they have minimally invasive drug -- lung transplants that only take five minutes and they're done outpatient basis and Mr. Stults will never even know he had it if that's what you want to cross-examine him on.

MR. GUNN: Well, first off, Dr. Pue doesn't do these, so he doesn't know. But secondly, if we're talking about five years down the road, we have no idea what a lung transplant procedure would look like five years --

THE COURT: And you can bring out all those points.

MR. MCCLAIN: Judge, I found the testimony I was looking for.

THE COURT: Yes.

MR. MCCLAIN: Okay. What he said is -- they asked him specifically in your report you're not offering any opinions --

MR. HILL: Which page are we -- sorry.

MR. MCCLAIN: 212. In your report you're not offering any opinion as to whether he'll need a lung transplant or when; correct? No, I don't agree with that statement, he says. I was stating in number 6 that I thought he was going to need evaluation for a lung transplant. Okay. I understand that. I'm trying to make a distinction. Evaluating somebody for a lung transplant, having you evaluated doesn't necessarily mean they're going to qualify or that they're going to have a lung transplant at some certain time. That's true. It depends on what the future course of event of his disease is. That's correct.

Then they go on to make this point that he was saying. Dr. Parmet testified yesterday that in his opinion Mr. Stults has generally been stable and in Dr. Parmet's opinion he would not need a transplant over the next ten years. Do you disagree with that opinion? Yeah, I do disagree with that opinion.

So he says no, I do have the opinion he needs a transplant, and I disagree with Dr. Parmet's opinion about whether it will be needed over the next ten years. I'm surprised he said that, he goes on.

And so to the extent they wanted to follow up on his opinion that he needs a transplant, he did disclose it, and he did address this point on Dr. Parmet, so they're not surprised on that either.

MR. GUNN: And who was asking those questions?

MR. MCCLAIN: Well, let me look. It says that your law firm was present through Mr. Tom Allen.

MR. GUNN: My question was who asked those questions.

MR. MCCLAIN: I'm going to find out.

MR. GUNN: Clearly we were present.

MR. MCCLAIN: So it doesn't matter.

MR. HILL: Your Honor, before we run out of time --

THE COURT: Yes.

MR. HILL: -- I would like to address the concern that you brought up or the issue you brought up --

MR. MCCLAIN: Mr. Allen from your office asked those questions.

MR. HILL: At the beginning of the argument after I had discussed the procedural problem with this late disclosure and the fact that it's not covered within the disclosure, you mentioned a very important issue, and that's the probative versus prejudicial effect of this evidence, and I'd like to address that argument briefly.

THE COURT: Yes, you may.

MR. HILL: I can hardly think of evidence that would be more prejudicial than showing an invasive procedure such as this when obviously the witness could easily describe for the jury --

THE COURT: All probative evidence is prejudicial.

MR. HILL: Sure, but I'm talking -- I'm talking --

THE COURT: If it's not highly probative, it doesn't help the party, so it's prejudicial to the other side. The question is whether the probative value is substantially outweighed by unfair prejudice, and the point I made yesterday is I don't see any unfair prejudice because this is a procedure that doctors have said it's more likely than not that he would have to have. So there's absolutely no prejudice let alone unduly prejudicial if you look at the probative value of it.

MR. HILL: Your Honor, we would --

THE COURT: I just don't see your argument at all. I don't even think it's close.

MR. HILL: Okay, Your Honor. I just want to make for the record that we absolutely --

THE COURT: Sure. And is there any other record you'd like to make?

MR. HILL: Not at this time, Your Honor, with regard to this --

THE COURT: Well, there's no other time to make it with regard to this exhibit, so you need to make it now because when lawyers say not at this time, there isn't another time.

MR. HILL: I just meant not with regard to the unfairly prejudicial argument.

THE COURT: Yeah.

MR. HILL: I think you have acknowledged our argument --

THE COURT: I do.

MR. HILL: -- at this point. I would argue, Your Honor, that a simple way to cure this issue would be to allow the witness to describe if a foundation is laid that he knows how these procedures are performed, allow him to describe that in the context that it actually relates to an issue in the case. It relates to what Mr. Stults will experience if this crystal ball prediction comes true with regard to his recovery from the procedure and his pain and suffering. That would allow the evidence to come in even though we maintain our position that Dr. Pue has never disclosed that he would talk about the impact or the result of this procedure.

But if you would allow him to describe it if the foundation is laid, that would allow this evidence to go to the jury without risking in any way the argument that this was unfairly prejudicial because of the extreme graphic nature of the video and the fact that Mr. Stults will not himself be pr -- be able to view or experience the graphic nature of the procedure. That would be an easy compromise that would allow this type of evidence. It would allow the doctor to give the testimony even though it was not disclosed, and the jury could then appreciate this.

Notwithstanding that, Your Honor, the issue of pain and suffering and what, you know, Mr. Stults will go through is an issue for the jury to decide. It's not an issue really

that's even appropriate for expert testimony. It's not the place of an expert to get up and say this is my opinion regarding an ultimate issue of pain and suffering. That's for the jury.

THE COURT: Well, he's not going to be testifying to how much pain and suffering Mr. Stults would encounter while he's under anesthesia if he has the procedure. But the jury's entitled to know what's involved in the procedure. And I agree with you if the doctor knows he can certainly describe it. And I'm sure he's going to describe it in conjunction with the demonstrative aid of the video. But your objection's overruled.

Any other record you'd like to make?

MR. HILL: If I could confer with counsel?

THE COURT: Sure.

MR. HILL: Your Honor, I think we also filed a motion in limine regarding Dr. Pue's opinions in general and the speculative nature of those, and I would just like to incorporate those same arguments with regard to the video as it might apply for the record, please.

THE COURT: Okay. Thank you very much.

MR. HILL: Thank you, Your Honor.

THE COURT: Appreciate it.

Anything else we need to take up this morning?

MR. MCCLAIN: Judge, I know we're short on time, so I just want to leave it as a place marker that we have to decide

on these 1006 summary blow-ups, and that's what I thought we were coming over for initially, but we can decide that later. Doesn't need -- because we have to start in a minute. But I just want to make sure that the Court has that in mind, and we'll take it up whenever we have time.

THE COURT: Well, we've got a minute or two. Did you find any case law that you want to bring to my attention? I didn't get an e-mail about it.

MR. GUNN: No. It was my thought that we had other issues and we could defer that. It doesn't need to be ruled on. And besides, I'm doing so well right now that I think I'll just quit for the morning.

THE COURT: That was funny. Thank you. Well on eating doughnuts or well on rulings?

MR. GUNN: Well, I'm doing better with the doughnuts than I am with the rulings.

THE COURT: Okay. We'll take a quick break, and I'll be back at 8:30, and we'll bring in the jury. Thank you.

MR. GUNN: You know, if you give them some doughnuts, they'll probably forgive you for five minutes.

THE COURT: Maybe. My cookies are better, though.

(Recess at 8:27 a.m.)

THE COURT: Ready to have the jury brought in?

(The jury entered the courtroom.)

THE COURT: Good morning. Please be seated.

MR. BRITTON-MEHLISCH: Your Honor, Mr. McClain stepped out briefly to do a convenience break.

THE COURT: Do you know who your next witness is?

MR. MCCLAIN: Your Honor, we call David Stults to the stand.

THE COURT: Thank you. Mr. Stults? Good morning.

MR. STULTS: Good morning.

THE COURT: Would you raise your right hand, please.

DAVID STULTS, PLAINTIFFS' WITNESS, SWORN

THE COURT: Thank you. Please be seated. And as you know, you can adjust the chair and the microphones so you can speak directly into them. And when you're settled in, would you tell us your name, please, and spell your last name.

THE WITNESS: My name is David Stults, S-t-u-l-t-s.

THE COURT: Thank you.

Mr. McClain?

MR. MCCLAIN: Thank you, Your Honor.

DIRECT EXAMINATION

BY MR. MCCLAIN:

Q. Mr. Stults, the jury's heard quite a bit about you and probably has some sense of your life and this disease and what it's done to you, but I want to let you tell your story to them now. So let's start. Where did you grow up?

A. I grew up in Muskegon, Michigan. It's a city right along the shoreline of Lake Michigan.

Q. And what did your parents do for a living?
A. My father was a controller of the local newspaper, and my mother was a bookkeeper. They both worked.
Q. And both were accountants or bookkeepers.
A. Essentially, yes.
Q. Essentially. And growing up, tell the jury what the nature of the town of Muskegon is. Your brother kind of showed us on his hand where Muskegon is in Michigan. Can you kind of give us a sense in the same way?
A. Yeah. So Muskegon is right along the shoreline. Detroit would be down near the base of the thumb, and we were right on the shoreline.
Q. So west -- you've been a west Michigander your whole life.
A. Except for about a year when I took an assignment with an employer to Baltimore, Maryland. Outside of that, yes.
Q. And so your whole life has been spent in and around Lake Michigan and large bodies of water?
A. The area that we grew up in in Muskegon was actually called Beachwood, and it was -- you've got Muskegon Lake which is a large body of water on one side connected to Lake Michigan through a channel on the other. And we literally lived on a little beautiful peninsula in a small home. But it was -- I mean, it was literally a two-minute walk to either lake and sand dunes and pine trees and trails and snowmobile and tobogganing trails. It was -- I can't think of a more idyllic place for a

young -- young kid to grow up.
Q. And other than the fact that it's winter nine months of the year.
A. Outside of that, right.
Q. Was it your dad who gave you your love of sailing?
A. You know, my -- my dad just passed away last fall. It's not even been a year. And my dad and I were very, very close. He -- he had this -- I am my dad. I mean, he used to, jeez, do you smell the pine trees, Dave, do you see the wind on the water, do you see that, and he -- because of the way he would drive to work, he would drive past Muskegon Lake every day, and he would tell me about how he always wished and dreamed that he could afford a sailboat. You know, what are those little white dots out there doing, and how do they move? I don't understand.

And ultimately he saved up some money and bought a little boat. And to me -- when he bought that, I was about nine. And it was the most incredible experience not only because how cool it was to be on the water and to be moving under the power of the wind but to be with my dad. My brother participated to some degree, but -- excuse me -- I -- I was there 24/7. And my dad was a little bit -- I veered to the other side. I tend to be more of a control freak with my kids I think.

But my dad would -- I mean, here I am ten years old and, Dad, I'd like to take the boat out today with a couple

friends; do you mind? And he would look -- peer out of the office window to try to get a sense for where the flag was flying and how aggressively the flag was flying and give me permission. Well, wear your life jackets, David.

But -- so here I was, I mean, a fifth grader essentially, out with a few kids sailing this boat. And it -- I mean, I learned a lot about sailing very early on.

Q. I mean, would -- you told me that unlike lots of dads even when he was on the boat he would have you sail it.

A. You know, he was so sacrificial. I mean, if you save up all your life or a period of time to afford this boat that you couldn't wait to get on but you give it to your son, that's the kind of guy he was because, no, no, David, you drive it, I want you to learn, I want you to understand.

And I don't think I really fully appreciated it, of course, at the time, but now in retrospect I do, that he was -- he was essentially trying to leave a legacy. He was imparting this love of all things, wind, water, food.

But yes, he would say, no, no, you drive, Dave, you drive. And, you know, I think there's many talented sailors out there, but, you know, Dennis Conner, America's Cup folks or whatever. But the truly gifted people are not something that they just perfect. It's almost a God-given thing that you can smell the air coming. You can see it on the water in little puffs, and you can begin to gauge and see where the wind is

going to be. And I recognized it early that the Lord had given me a wonderful gift to be able to see and how to make boats go when others weren't.

Q. And so did you progress, and did this become something that you were known in your area as being excellent at?

A. I was very blessed, so, I mean, here I am now a 16-year-old kid with, you know, 6, 7 years of experience under my belt which was maybe average, but, you know, I think kids take to things better than adults. I think kids can -- you know, you put a kid on a pair of skis, and two months later, you know, they're doing solemn, whatever. I mean, kids have an innate way to just gain expertise in things. And I was one of those kids.

And regardless of the size of the boat, I was able to get on and just make them go. And, well, you know, let's take the sail in a little different, and let's go this way, and I see some wind over here, so let's head over there, and we started winning races.

And, you know, for men who spend tens of thousands of dollars, hundreds of thousands of dollars, on sailboats to race, they want to win. And so I was -- I was, you know, hey, Dave, would you mind sailing with us next week? Well, I've got that one booked, but I can do this one. And what a great thing for a kid, you know, at 16, 17 years old to be able to have such a gift. Amazing.

Q. So what you're saying is is that other people that owned

big boats would ask you to come sail their boats in races because they wanted to win. They owned the boat, but they didn't know how to drive them.

A. Yeah.

Q. And so they would ask you at a very young age to come and help them win these races.

A. I don't think I fully appreciated what was going on at the time, you know, as many peop -- young kids are who have a gift, they think everyone can do it; right? I'm good in math. How come you're not? Excuse me. You know, I can read quickly. How come you can't? I don't think kids fully appreciate the gifts that the Lord has asked them to steward.

But yes, so, I mean, from Chicago to Detroit, if I wasn't delivering boats in the summer -- and by that I mean oftentimes people wouldn't want to take the time -- sailboats don't go quickly. So, you know, they would hire someone to move their boat from, say, Chicago up to the northern Michigan area that's just strikingly beautiful. And I would get a group of my friends and do that. And it's how I began to save money for college.

Q. Well, let's look at an example of this, 1589, the Exhibit Number 1. Is this an example of you on a boat at the time that people were asking you to captain -- am I using the right term? Is it captain the ship, or is it the --

A. Skipper or helms -- helmsman. I mean, the owner, of

course, was always there and the navigator.
Q. So he's the ex officio captain. But you're the helmsman or the skipper. And how old are you here in this picture?
A. I think I'm probably a senior in high school, so 17 or 18. This is me at the back of the boat. My mom and dad are over here. The interesting piece as I saw this picture, my father is probably in that picture the same age I am today.
Q. And I don't want to -- I know this is -- this is a hard thing to talk about for you. Your dad was very vigorous at that age.
A. Oh, yeah, yeah, very much so. He was racing on other boats too.
Q. And he lived to be how old?
A. Ninety-one.
Q. And at 85 as an example, was your dad more vigorous than you are today?
A. Arguably. Yeah, my -- yeah, I think that's fair.
Q. Let's look at -- let's look at 1589-14. Is this -- is this another picture of you sailing in your youth?
A. Yeah. So the name of the boat is actually Spirit, and it's a boat that my father would sail on on occasion. While we had a boat, it wasn't very large and not very competitive. So we found -- we found great joy in racing, so we would race with other people on their boats. And I was asked to actually steer this boat, helms -- drive the boat. This is on Lake Michigan.

We're offshore. There's not much breeze.

But the reason someone took this picture is if you'll see down here at the bottom, the little wave action there, the boat's moving. If you can see on the water, there isn't any wind. And the picture was taken by a friend of my father's saying this isn't even fair. The wind isn't even blowing, and your son's got the boat moving, how does he do it, so that was something we always hung on to.

Q. Let's look at 1589-15. And what are we seeing here? What is this a picture of?

A. Yeah. So I'm probably 18 or 20 in this picture. And after -- you'd have many weekend races where it would be a series, Friday, Saturday, Sunday, different types of cups, whatever. And the -- the ceremony was the winning skipper got thrown in the water. So if you won the race, you didn't know when it was coming after the final race, but ultimately at some point a few people were going to sneak up on you and throw you in the water. And this is that -- someone snapped that picture.

Q. I mean, Dave, I think that part of this is being involved in sailing, particularly the kind of sailing that you did most of your life, is that pretty physical activity?

A. You know, I don't think it's recognized to the layman to be that. I mean, the boats look like they're just kind of moving along ever so gently and what not, but racing boats is incredibly exhausting sport. I mean, you're pulling on lines,

you're cranking on wenches, you're running back and forth, you're grabbing bags of sails that weigh hundreds of pounds and pulling them up and putting them up on the dock and then pulling the lines up to get them aloft. It's a very grueling sport.

Q. And you gotta tie lines off. You've gotta, you know, sometimes get in the water. All that is required of you.

A. Well, and driving the boat is incredibly -- I mean, you've got -- when I started, hydraulics weren't really used, so it was a cable system to drive a boat. I would equate it to having a car without power steering. And, you know, you've got a lot of energy behind this thing.

And sometimes, you know, you weren't far off of disaster. I mean, maybe you've seen videotapes of boats that, you know, take on too much wind or what have you and they essentially flop over. That can be true of any size boat, five foot to fifty or a hundred. If you catch the wind the wrong way for too long, it will -- it will tip you -- it's called breaching or broaching, and you will come to a point where you're out of control.

So many times, you know, here I am, this 20-year-old kid or what have you, just on the edge of -- we would call it on the edge of disaster. But that was the fun. And it wasn't my boat.

Q. Let's leave sailing for a moment and talk about where you went to high school.

A. I graduated in 1978 from Muskegon High School.
Q. And what did you do after that?
A. So, you know, I -- I went to community college for two years. I wasn't taking a lot of classes. I really didn't have a sense for what I wanted to do, and my folks weren't very interested in investing in someone who didn't have a clear vision. So I went to a community college, probably a very average student at best. I went there for two years and was close to an associate's degree and had some friends moving on to Central Michigan University as --
Q. Where is Central?
A. As the name implies, it's in the middle of the state, right smack in the middle of Michigan in Mount Pleasant. And so I went there to complete or to pursue my bachelor's degree. I was actually at Central for four more years so six years of --
Q. You were on the John Belushi plan of --
A. I had a lot of fun. I mean, I was very socially involved, the president of several organizations, the vice president of the student body. I was very socially involved but, you know, went about my education as well.
Q. We talked about sailing, but, Dave, have you always been a good athlete?
A. Yeah. So, you know, I mean, I was playing hockey. I was playing football. I was -- both in high school and a little bit in college. I had opportunity to, I mean, kayak. Whatever

people were doing, either they were organizing or I was. I mean, I'm just very, very active. So kayaking, camping, canoeing. If it had something to do with water, I was all in.

Q. And did you get joy out of physical activity of any kind?

A. Yeah, absolutely. I was never the couch potato kind of guy. I was never the guy that would just watch. You know, sitting on the beach for me was, you know, maybe five minutes and -- I'm sorry. You know, after a few minutes of sitting on the beach, I'm ready to -- you want to play volleyball or something, you know? So yeah, I'm not -- I'm not very laid back. Well, I wasn't.

Q. And did you finish your degree at Central?

A. So -- the answer's no. I was a math class or two short of graduating. And I think of all the classes I had to take, math, finance were the biggest areas of struggle for me which is interesting given the profession I ultimately got into.

But I was actually at a boat store in Muskegon the summer just before I was getting ready to go back, excuse me, to complete my degree. And I was t -- and I saw the salesperson trying to help a gentleman, and it was clear that this gentleman wanted to buy a sailboat and this clerk didn't know much about what he was answering. And I said, you know, that's not good infor -- that wasn't right, let me help you out here.

And we actually went outside, and I showed him some boats that were for sale and the differences and did he want to

race or cruise and how big was his family. And we spent an hour or so together, very nice man. And he said to me, "So what do you do?" And I told him that I was getting ready to go back to graduate. And he said, "Well, I'm the president of a local bank, and we're looking for a guy to head up our marketing department. Would you be interested?"

Well, you know, you go to school to get a job; right? Excuse me. So I said, hey, well, you know, I'm a couple classes shy, but maybe I could do that simultaneously or remotely or what have you. And he said, "Well, come on board."

So I went to work for him and always had the intent I think of, well, when I get more time, I'll finish that degree. I ultimately never did.

Q. But you went to work for the bank, and were you very successful for them at marketing?

A. So bank marketing is interesting. You know, it's very highly regulated. FDIC and, you know, what you have to say and all the stuff in the fine print, and it was very boring for me. You know, we opened up the first ATM in west Michigan, and we literally -- I can remember having to drive over to the older lady who lived next to this little corner lot where we had put this independent ATM and, you know, hey, the lights are shining in my bedroom window now, and that thing's probably going to cause cancer, and people are going to want to rob it because there's money in it.

And here I am, this, you know, 22-, 24-year-old kid, well, it doesn't cause cancer I don't think, I'm sorry about the lights, and here's a coupon to try to assuage your concerns.

But yeah, so I did the bank marketing for about six months. It was really pretty cut and dry. You know, I was responsible for the summer popcorn wagon. It wasn't -- it would be very different today I think, but at the time, you know, I had some friends who were getting other types of sales jobs, and I thought, you know, I might be good at that.

So I ultimately left that job after only six months and went to work for Xerox Corporation in the sales area.

Q. And tell the jury how that went.

A. Xerox is a large corporation, of course. I was very blessed, literally cold calling on small companies, you know, do you have a copier, you need a copier, how old is your copier. Tough. You didn't make a lot of money. But it was a great environment really because it was very challenging and good training, good communications. I'm rubbing shoulders with people that were frankly, I thought, much smarter than I, so that was very challenging.

I did that for a couple years, and a friend of mine had gone to work for a company that was associated with IBM. They were selling computers and solutions in the manufacturing space. And so I went to work for them because I thought it'd be more money. And the base salary was actually more than I'd ever

made at the time, $36,000. I'll never for -- I thought, wow, I've arrived. It was -- you know, even today that's good money. And I did that for a couple years. I found that I was not the techie computer type of sales guy because typically my customers knew a lot more about such things than I did. And I didn't like not having the answers or being very good at the knowledge.

So some friends of mine again who had left Xerox had gone into medical sales. And I thought, man, I've always been intrigued by all things medical. So, well, you know, do you have to be a doctor or do you have to be a biology or chemistry major? No. Marketing. Okay.

So I would have to go to them and say, hey I'm just a couple credits shy, but, you know, but my -- I had begun to establish a pedigree of past performance by this point, so they were willing to overlook the fact that I was shy of a degree. It wasn't as important in the early '80s as it is perhaps today.

So I went to work for this little IBM facility, and then along came a company called MetPath Laboratory, Corning Clinical Laboratory. They're a reference lab. They sold a service.

So you'd go to your doctor. They would draw your blood or your tissue, you know, your Pap smear or drug screen, and a courier would come by at the end of the day, pick up those samples, run the analysis, and fax the results back the next day.

And again, so fortuitous because that was just when drug screening was becoming mandatory for aviation and truckers and that type of folks where people had to have a preemployment drug screen.

And so here I was, the only guy in west Michigan with a clinical laboratory that was approved to do such things. And, you know, the Lord blessed me so much. So, I mean, every doctor I went to who was doing any kind of occupational medicine, yeah, well, if I'm going to send you my drug screens, I might as well send you everything else. So it was just, you know, hand over fist, I couldn't -- I was very busy.

Q. And did this company ultimately become Quest Diagnostics?

A. Yes. So I went from sales rep to region manager which required a move to Baltimore, Maryland. So Barb and I against -- against her hopes -- you know, I was thinking, hey, I would go to Alaska to take a promotion because let's ride this thing as far as we can. We literally -- she was in her eighth month when I took the promotion, eighth month of pregnancy, and, you know, well, honey, it will be fine, you know, we'll move there. And I didn't fully appreciate what I was asking her to do. She -- she --

Q. Let's stop for a minute. Let's stop for a minute. Couple things, one, I want to back up and talk about how you met Barb, getting married to give the jury the chronology. Then we'll come back to work.

But also I think you need to slow down because I don't want you to get worn out here, and it's going to be a while to tell this. And I can tell you're -- if you need a break, just let us know so that you can catch your breath at any point.

A. Thank you.

Q. Okay? Now, how'd you meet Barb?

A. So I had put aside the things of youthful enthusiasm, of, you know, in college you went to a lot of bars, and you would drink on weekends, and I was that guy. And I think I recognized that, you know, there must be something more to life than just going to bars on weekends.

And I came to a place -- my brother was then a minister. And he began to speak to me about things of God. And I -- I was at a sense at a point in my life where I was recognizing there must be more to life than what I thought. And he invited me to go to some meetings, and I did.

And there was a guest evangelist that came to Grand Rapids, and I was that blithering idiot that walked down before and said yes, I need to change my life, and I'm willing to -- and ready to do 180 degree from my previous life and -- and began to attend a church.

And it was a large church, you know, several thousand people. And I remember seeing this beautiful blond in the choir, and so I joined the choir and began dogmatically going after her. She was not very amenable to my -- she thought I

was, you know, stalking her or something, and I was just trying to get to know her.

So ultimately I said, you know, if we're going to be in this ministry together, perhaps we should just have coffee and bury this thing of me chasing you around and making you feel uncomfortable. And she agreed. And that was the beginning of the end.

Q. For her maybe. It was your bright future.

A. It was. It was. And we got along marvelously. I appreciate that she had some defenses initially, you know, who is this guy. You know, west Michigan's predominantly Dutch people, and here's this, at the time, dark-haired, mustached man who was very gregarious and outgoing, and she didn't come from that kind of background. So -- but we had a wonderful courtship. And we've had a wonderful marriage.

Q. You've been married for 26 years?

A. We have.

Q. And we saw your kids yesterday, Courtney and Taylor. Let's look at -- let's look at 1589-22. About how old are the kids here?

A. Yes. I think Courtney's probably 13, 14, maybe 15. Courtney is two -- or Taylor is a couple years younger. It's interesting to note here that -- so he's probably 13, 12, 13, and look how big he is. I mean, the guy is just -- I think today he wears a size 16 shoe, and he's up about this tall. But

yeah, those are my kids.
Q. Go to the next photo. And this one we saw yesterday. Barb mentioned that for you two being with your kids is the most satisfying experience that you share together.
A. Yeah. We will sacrifice anything. I think Barb mentioned that, you know, our friends will say, well, why would you go to these nice places with your kids, you gotta get another room or have them stay in your room? And, man, you know what? It's such a short season that you have these little guys, and we just -- we enjoy them, you know, and they enjoy us, and we have a lot of fun together. We still do. It's changed, but we -- we're a very close family.
Q. Let's talk about when they were young kids and the things that you liked to do with them. Let's look at Exhibit 1589-11. You mentioned the fact that, you know, with Quest Diagnostics -- and I want to come back to your work history, but throughout your life, have you been a hard worker at your -- at your various jobs that you've had?
A. Yes, of course, and who wouldn't say that they're not? But yes, I mean, I -- but I tried to balance it. You know, I think my generation was one of -- you know, my father was quite stoic. I mean, I was fortunate that he would want to get involved with me and stuff on the weekends, but I didn't see him much during the week. I can remember carpooling when it was his turn to drive me and some of my neighborhood kids to school in the

morning. You know, he would miss the turn to school invariably because -- and he would say, well, I'm already at work mentally. So my dad was of that generation where they were more removed. They were less -- I can't think of the word but less --

Q. Physically involved with the --

A. Yeah, yeah, yeah, right. So my generation I think began this engagement of, you know, I want to attend all your stuff, I want to be there at school, I'll take time away to be at, you know, your birthday party at school. And I was certainly that guy.

Q. Let's look at some other pictures of some of those scenes from the kids' childhood. Let's look at 1589-16. This Barb addressed yesterday. And I don't want to replow all that ground except I want you to tell the jury, you know, what kind of bonding experience this was with you and Taylor in terms of your --

A. Right.

Q. -- relationship.

A. Well, I can certainly tell you when the picture was taken I never thought I'd be sitting here in a courtroom or I would have combed my hair. But my son's probably 15 or so here. I'm competing with video games for my son's attention and my daughter's attention. I'm competing with things that are instantly, you know, tactile and responsive. And it's hard to get a young guy out into the woods or on the water where things

happen more slowly. And so I'm doing all I can appreciating the fact that yes, we live in a generation where Xbox and video games are prevalent. But I refuse to give up and not be engaged in his life. I refuse to allow Xbox to shape his sense of what it was like to be involved in things, and to this day I try to include him with things outside of a TV screen.

Q. And did you try through physical activity which you enjoyed so much to bring your son into a world that you enjoyed that was beyond the four walls of the house and being inside and being engaged in video games or computers?

A. So Barb mentioned yesterday that she would -- she'd go to choir on Thursday nights, and so that was my night with the kids. And, you know, it was -- I can remember taking, you know, things out of the garage and making a course that you have to take your scooter through, and neighborhood kids would come and see and, oh, so I was the fun dad in the neighborhood. Or we would be playing games in the backyard, stupid little things, but they were -- I knew -- but I knew and I know today that I was making an impact of showing them that their dad was involved and engaged in their life.

I used to play a game that Barb mentioned yesterday called get where, you know, if a kid was next to me, my son or daughter, you know, I'd look over at them, and I'd poke them in the rib, and then I'd, you know, begin to get them in the neck. And the next thing you know, we're wrestling on the floor. And,

you know, my kids are very ticklish and so am I. And we had a lot of fun together. And then Barb would shout in from the kitchen, "Someone's gonna get hurt," and typically someone did.

Q. But -- I can tell, Dave, this was very important to you and hopefully the kids. To be physically active with them is part of who you are.

A. I don't want to just talk. I'm a very touchy, feely guy. I'm very -- you know, I mean, to this day my daughter, twenty-th -- come here and sit in my lap. You know, Dad, please. No. Or give me a hug. Let me hold you a minute here. And I think she relents. You know, she rolls her eyes, and she'll come give me a hug and look, honey, you're the only one I have, you're the only little girl I have, and I'm going to dote on you forever. I pity the fool that comes to date you. So yeah, I'm very touchy, feely.

Q. Look at some of the other activities that we had pictures of just briefly. Boating, did you attempt to pass on or have you attempted to pass on your love of boating to Taylor and Courtney?

A. So this is before I was -- before I got sick. And I think we're down in the Virgin Islands, and there's some caves in the background, and we had rented a boat for the day and threw an anchor out, and we could snorkel into these caves. And, you know, for -- I don't know -- a kid 12 or 14 years old to be able to -- we never positioned it as, you know, hey, we're taking

these -- I mean, these vacations hurt us financially, but we saved all year for them. This was important to us. And, I mean, the experience of a kid that age to be able to go to that setting and snorkel inside a cave and see all the different fish --

Q. Dave, it sounds like you were creating adventures for your kids every chance that you got.

A. Well, yeah, because my dad couldn't other than the sailboat, right, and he was somewhat disengaged. So I think -- again, I think my generation is one that is trying to make up for I think in some ways. I certainly was.

Q. Summer, winter -- look at 20 -- snowmobiling? As I said, lots of snow Michigan. You tried whatever the weather condition was to find some way to be active outdoors?

A. You know, you would think that snowmobiling or jet skiing for that matter you're just sitting on something and pushing the gas. You wouldn't think that that would take much effort. But I can't do that anymore. Yeah, so, I mean, we used to try to snowmobile and what not. And, you know, that stuff shakes you up and down, and I lose my breath. I get winded.

Q. Let's go back to work. Let's talk -- let's talk about your work history. You mentioned the fact that you were at Quest. And were you successful at Quest?

A. Yeah. Again, my life outside of what brings us to court here today has been just a wonderful, wonderful life. I was

successful, went through -- went from sales rep at Quest to region manager to district manager and then I think largely because my wife was praying so hard to get back to west Michigan that the Lord arranged for -- I'll never forget them coming to me saying -- and this is when we were beginning to -- okay, so now I'm, you know, in my early 30s. Where do we want to go? What is our life going to look like? I mean, we have a couple kids now -- we have one child. We're planning to have another one or two. And, you know, how much money is enough? Where do we continue to relocate to?

And they'd offered me a job to move and take a promotion in Colorado. And I thought, oh, what a great place, you know, the pine trees and the mountains, and it sounded so romantic. But as Barb and I talked about it, you know, how much is enough? Family is so important. We were -- we had no family in Baltimore, so we passed on that promotion. Barb was praying hard with friends to get us back home, and they came to me, and they said, Dave, we're going to create a new division, and we'd like you to lead it from a sales and management function. And you can live anywhere you want to live.

Well, we knew where we were going to live. So we moved back to Grand Rapids, and that role, ultimately I became the vice president of North American sales for that division of Quest Diagnostics and was very successful, and my wife was now home, and I was back with friends and family, and it was a very

sweet time.

Q. And did your job with Quest continue to grow?

A. It did. We were growing and doing well. And then the senior vice president said, I'd like all of my vice presidents who were scattered throughout the country, California, Texas, Florida, me in Michigan, I'd like all my vice presidents to be located in Teterboro, New Jersey.

And I don't know if you've ever traveled to Teterboro, New Jersey, but, you know, it's one thing to go there for a business meeting. It's a different thing to raise your family in New Jersey to a little midwest kid like me, I mean, so I went to him. I said, you know, I don't want to do this. I mean, the Internet was coming to the place where you could begin to do things remotely, and I said, you know, I mean, certainly there hasn't been any performance issues. Communication, I think we can do this, and they said, "No, we really want you here," and I said, "I'm sorry, I can't do that."

So we came to an agreement. They cut me a check and released me from my commitment. And I took that check, and I thought, you know, I have kind of an entrepreneurial itch. I'd like to do something. So I went and bought a landscaping company, an underground sprinkling company, not realizing I was going to be a contractor. I didn't really put that together. I thought I was just going to own this nice little landscape company.

But the challenge was in Michigan, as you can imagine, that's very seasonal. And now the employees that I was hiring, I began to miss the folks I was working with who had career goals and what not. And these folks, I mean, I'll never forget coming to a place of, look, I'm just not -- I'm not blending with my employees as I'd envisioned or hoped.

So I said, look, let's do this. We're not going to work Thursday and Friday. I'm going to take you all four people at a time out on Lake Michigan for a charter fishing trip because they had talked about how that would be really cool to do. And I said, "I just want to spend the afternoon getting to know you, you get to know me. And I think this will put us on better footing to have a relationship as employer and employee."

And a group of the foremen came to me and said, "You know, we've been talking, Dave." Excuse me. "We've been talking, Dave, and if you'd just give us the money that you were going to spend on that charter fishing trip, we'd prefer that."

And I said, "You guys don't get it." And I realized then they may not ever get it. We're just -- we're in two different worlds, and I want to build a relationship with you, and that's not going to happen clearly. I mean, you know, it was a disconnect. And I grew to really not enjoy it. Very successful. We doubled the size of the company in a year and a half.

And, again, the Lord comes along, and I'm talking to a

potential customer, and I'm walking through his palatial backyard and pool, and he began to ask me about my business. And I had the keys to the business in my pocket, and I said, "You want it?" And he said, "Yeah. Thank you." And so I sold it to him over the course of a couple months. And for me that was an exit strategy that was just beautiful.

Q. And so did you get back into medical sales?

A. I did. I did. I did a couple different things. I actually got into a surgical arena where I was selling orthopedic sports medicine products, products that, you know, would go into the shoulder for a labral repair or meniscus products, suture anchors and what not, fascinating to a guy who enjoyed medical.

So here I am now in surgery. I'm not scrubbing in, of course, but I'm standing right off of the sterile field instructing physicians on the latest techniques of how to insert these different tools and what not, fascinating to me but crazy hours, crazy hours. I'm covering the whole state of Michigan and, you know, surgery began -- you know, you had to be there at six o'clock to get your instruments sterilized. And so, you know, you'd have a two-hour drive and just crazy hours. And the money was okay.

But, you know, it wasn't long, maybe a year or so, I'm like, oh, my gosh, you know. I mean, the money's okay, but I'm never home, I'm never home.

So Karl Storz Endoscopy, a German company, came along. And again, you know, so fortuitous, I mean, these opportunities would just lay themselves in my lap. Hey, we're going to start a new division in sports medicine. Would you be interested? Yeah. And your territory would just be Grand Rapids. Awesome.

So I did that for a couple years and actually won a trip to Germany as the best guy in the country. We didn't take that trip because a headhunter, a recruiter, had been plaguing me for months and had said, you know, "Karl Storz is not where you belong. You belong at GE Healthcare." And they plagued me for months and months. And finally, okay, I looked at it, and I thought, okay, I'll go that way.

Q. And so you ended up at GE, and how'd that go?

A. So actually the company that hired me was a little company called Fusion Sales Partners. They had a contract with GE. GE is obviously, you know, one of the top five employers in the world, huge multi-national corporation. Like them or love them, hate them, whatever, they're very good at what they do. And they recognized that there were certain markets in Michigan that they had very small presence, small share.

And so they were going to hire what they called mercenaries that they weren't going to pay a base salary to or benefits to but they were going to pay you a very high commission rate on what you sold.

So this Fusion Sales Partners, I was basically a 1099

employee meaning I was self-employed. I didn't have any benefits. But I was selling GE X-ray, nuclear medicine, CTs, and CAT scans and MRI machines and fascinating technology, fascinating technology. And really I enjoyed it, and I enjoyed the people I'm talking to, physicians and nurses and technicians and bright, articulate people. And I knew that I had found something I was going to enjoy because these people were all far brighter than I was. But I looked good in a suit, and it seemed to work, and it was going very well. Excuse me.

GE started paying huge commissions to this company. And I think as someone had testified earlier, I was doing very well. And GE, you know, again, smart company, said, okay, this deal is done. We're all done. We've gotten market share now. We've got, you know, a base of business by which we can build off of. So we're going to cut this contract off. You know, we're going to pick and choose which employees we want from your organization and offer them a contract.

And I was fortunate they hired me. So I think I -- while I was doing the exact same job, I was now a GE employee rather than a Fusion employee. And I literally was doing the exact same thing in the exact same hospitals, but now I had a base salary and a company car and benefits.

Q. And so you came to work at GE. You'd been successful at Fusion. And did your success continue at GE?

A. So yeah. I was -- you know, this was the onset -- you may

or may not -- I don't know, you know, what your background is in the medical industry, but this was the onset of when CTs were going from 2-slice and 16-slice to 64-slice meaning that they would take a -- you know, a certain 2.5 millimeters of coverage, of X-ray imaging material, and they would slice that up into 64 little microscopic slices, so physicians could get in and literally with the reformatted image on a computer screen get in and see what disease state or bones or what have you were hiding behind, behind lungs or what have you and fascinating technology, just a riot to sell because we're changing the world. And, you know, so selling a lot of these 1.8-million-dollar CTs, and I was busy, and it was fun.

Q. And so were you successful in continuing to expand the market share of GE for these new amazing technologies that all of us probably have experienced, and was it quite rewarding work?

A. You know, it was so rewarding because these are -- I mean, so now my territory was becoming much smaller, and I was handling large hospital networks because at that point hospital networks were beginning to acquire other hospitals, and hospital systems were becoming larger. So my territory was getting smaller and smaller, and I was dealing with larger and larger systems.

And, I mean, so now it was getting more and more personal because, you know, I would hear a friend say, yeah, my

mom's going to, you know, XYZ hospital system for an MRI. Oh, that was my MRI that I had sold them or, you know, my dad has chest pain, and I know they did a CT or a nuclear medicine study. That's my equipment diagnosing your dad. And ultimately it became my equipment diagnosing me with this terrible disease.

Q. That was the supreme irony?

A. I'm sorry?

Q. That's the supreme irony.

A. Crazy really but, you know, so thankful that they had my stuff because I knew that the competition, Siemens, Phillips, Toshiba, what have you, didn't do things quite as well as we did, and I was just so glad that I'd been successful and blessed in my business that GE was the winning vendor because I knew that the images they were going to get were going to be the best.

Q. Let's talk -- let's talk about this -- you know, you talked about your success in business and the way that you were blessed. Let's talk about some of the things that you enjoyed independent of the kids or maybe with the kids sometimes. But were you an avid golfer?

A. You know, I love golf for so many reasons. I mean, the lawns are beautiful. They're green. The vistas are great, the trees. They're well manicured and fertilized and watered. They're just beautiful. And Michigan has so many pristinely beautiful golf courses, and I was never really very good. I was

okay. But yes, I played a lot of golf several times a week. Any time somebody wanted to play I would -- I had the clubs in the car.

Q. And did that make you successful in selling?

A. You know, it's all about relationship. You know, my wife, bless her heart, she said the guy could sell bark to a tree. And in my mind it really is all about solutions. I mean, I can remember coming into large hospital networks, and they're saying, well, we're trying to solve for problems. We're trying to determine patient volumes and, you know, perhaps you've had to wait a day or two or go get an MRI at two in the morning. It's because of the volume. And these exams take a long time.

And I was able to -- oftentimes the solution and the projects that I would manage would be, look, you don't necessarily need another piece of equipment. We can take something you already have and move it over here and mothball that facility.

So I became -- because I wasn't just trying to get a deal. I became regarded I think because I was actually doing project planning for these folks and helping them. Hey, look, you don't have to buy anything from me. I'll help you because I live here. I mean, these are -- you're my physicians that ultimately I would be using to help me.

So it was very relational. And at that point golf was still okay in the marketplace to take a physician out and spend

an -- but they became my friends. They became people that, you know, we -- they loved to golf, and I loved to golf, and I had an expense account, so, I mean, that's the reality of the world at the time.

Q. And so you enjoyed it, and Lee was mentioning -- oh, no, I'm sorry. Dr. Ostrander was mentioning that you had a pretty low handicap, you were pretty good at it, you enjoyed it, and you did it quite a bit. Let's talk -- let's shift to your -- microwave popcorn if we can. Dave, do you enjoy food as much as you do physical activities and just, you know, the -- you know, you've talked I think about -- and I get the sense about your love of being in the air and the smell of the trees and the wind on the water. Is food like that for you too?

A. You know, my wife and I even to this day will get out of the car in a parking lot, and is that Vietnamese I smell? We should go have lunch, you know. Street vendors in downtown on the courtyard with hot dogs, they're amazing. I love food. I love all kinds of food. I love unique -- unique food, not so much Ethiopian, I've come to learn, food. But yes, in general I just -- I am a foodie. My wife and I enjoy watching Food Network shows, how to do stuff, how to prepare stuff. I've got plenty of restaurants on speed dial for delivery. I -- yeah, I mean, so that's the food piece. I don't know that I answered your question about microwave --

Q. No, but did you really relish the aroma and taste of

microwave popcorn?
A. I hope you're getting the impression that everything I do is with great zeal and joy. I really -- I mean, you know, I am that cup half full guy even today. Even today I go after everything with joie de vivre and excitement and enjoyment from a cup of coffee in the morning. I just enjoy -- and I enjoy people.

But yes, microwave popcorn for me -- and I'm not sure when it even became available in the marketplace initially. I don't know. I mean, you know, trying to ascribe dates was difficult through the course of this process because, I mean, you know, what toothpaste did you buy in 1984? I know I bought toothpaste. I know I enjoyed using the toothpaste. But I -- I love popcorn. I still love popcorn. We don't use microwave popcorn. But we still make popcorn.
Q. And did you find yourself as time went on because you enjoyed popcorn eating more of it?
A. Yeah, yeah. So, I mean, it was just an easy snack; right? I mean, and it was billed and labelled as a healthy snack, you know, and, you know, I -- I didn't always eat the whole bag. For me it was just something to munch on, but I loved -- I had a technique that I developed, you know. If you take the bag and you grab opposing corners as you pull it, it doesn't open up as quickly, and I love -- the smell was so -- you called it pungent. I disagree, brother. I love that smell. The

buttery s -- and the salty and, you know, you could -- if you pull the opposing corners out, the steam didn't come out so quickly, and you could -- you could -- I mean, obviously you couldn't get down in the bag. But as close as you could without burning your nose hairs, I just loved to -- for me that was as much an enjoyment as eating the product.

And, in fact, sometimes I would empty out some of the stuff because I loved the old maids at the bottom of the bag, not necessarily just the popcorn.

So yes, I've for years at work and at home, you know, I would take it out and just like that commercial showed, you know, I'm (demonstrating) -- I'm breathing that stuff in and getting it in and sucking it up, and I had no idea that this stuff was ultimately potentially going to kill me. And you know what? That should not be. You should be able to go to a grocery store and buy a product that people bill as a healthy snack and enjoy it at whatever level you choose to enjoy it at without risk of harm.

Q. And in general how many bags did you find yourself popping a day? Barb talked about the fact you popped two, but really you were only having one. On average or, you know, as you've thought about it, what was kind of the daily routine for microwave popcorn throughout the years that you were consuming it?

A. So Barb and I were married in '88, and I have to use

landmarks to give you approximate dates because that's just -- I'm not -- I've never been good at dates, and I think I'm even less capable today. But I can use landmarks to remember things.

So we were married in '88. We were dating in '86, and I remember having microwave popcorn together then. I can remember using it at work at Xerox which would have been, you know, in the earlier '80s or mid '80s, I think, ish. But we had it at Xerox in the office. I took it to my other offices with me. They'd have vending machines with this stuff that you could buy. And microwaves were very common in the office place. And I would always have a bag a day in the office. I liked it. It was healthy.

And then we'd come home, and our routine was that, you know, I would tuck in one child while my wife was tucking in the other. Then we'd switch. Sometimes we'd do them both together depending on if they were having a bad day or whatever. And she would tend to linger. I would go downstairs and, you know, begin the microwave process for both of us. She liked a couple bags, and I liked at least one.

So, you know, and I guess it potentially sounds weird that, you know, you know, gosh, you're eating how many bags of popcorn? But again, I didn't always eat the entire bag. I just enjoyed the smell. I still enjoy the smell. I mean, if I walk through an airport and I smell popcorn or a movie theater, I still love the smell.

Q. It's very enticing.
A. It is. They've done a great job of creating a product that, you know -- they've done a great job. They did a great job.
Q. I mean, this -- we saw one commercial.
MR. MCCLAIN: Let's go ahead and look at that again, Scott, if we can. Can you bring that up and the other one too? Do you have them both available? Let's just look at one.
(Video was played in open court.)
Q. I mean, you know, the -- I think probably we've all smelled microwave popcorn throughout the office. Some people really like it. Some people may not. But in general the way that they portray consuming the popcorn and enjoying the smell, was it like what you did or unlike what you did?
MR. GUNN: And I object about the way they did that because IFF had nothing to do with that commercial.
THE COURT: Well, the objection's untimely. It's overruled.
A. Well, a couple things. Orville Redenbacher, you know, he used to do commercials where he would talk about the quality of his product, you know. Here's this sweet-looking old guy that, you know, would find the best ears of corn and harvest that corn. And I can remember -- I still remember those early commercials. I thought he was a real guy. I thought he was like Betty Crocker. Don't tell me he's not a real guy because I

thought he was. And I thought he was kind of the quality guy.

So we ate -- I love Orville Redenbacher butter flavor popcorn. If I could find it, I -- that was my favorite. And, you know, I don't know about the legal stuff of who's making what for who. But I know that I was after that butter flavor, and Orville Redenbacher was my popcorn of choice.

Q. And the butter flavor is what was -- what was so appealing to you, the butter smell and taste.

A. He did it -- Orville did it -- well, whoever -- whoever they are did it best, yeah. And the bag, I mean, I can still see, you know, the glued edges coming apart. You know, you microwave it to 350 or 400 degrees or whatever.

And by the way, the microwave beeping is never a good sign. That's not -- it doesn't mean it's done. I mean, I had a technique established. And I would open it up and just (demonstrating) relish -- I loved the smell.

Q. And --

A. I smell my food today. I mean, if I'm having a steak, the smell -- I'll just sit there and admire it before I attack it.

Q. Did you have any sense at all during the time that you were consuming microwave popcorn that it could at all be injurious?

A. Of course not, no.

THE COURT: Mr. McClain, I'd like to give everybody in the courtroom a stretch break. Thank you.

Thank you. Please be seated.

Mr. McClain?

MR. MCCLAIN: Thank you, Your Honor.

Q. I want to talk to you about your medical diagnosis, but before we do that, before all of this came about, did you remember growing up as a kid or in your early adulthood ever having any difficulty with breathing?

A. Never, never, never, never, never.

Q. And were you always -- did you always have a lot of endurance for running and for playing and being physically active?

A. Yeah. I mean, I was a normal kid. Well, perhaps a little bit more -- I was the organizer. Come on, kids, let's all get together, and we're going to play this game or that game. So from that standpoint perhaps a little out of the box. But I was that organizer kid right through college, I mean, getting my friends to play in intramural leagues of baseball, soccer, floor hockey. I mean, loved that stuff, still do.

Q. So when was it that you first began to notice that you were having difficulty keeping up?

A. Yeah. So Barb and I were taking walks in our neighborhood which had a little bit of hill and slope and what not through the course of -- again, I use landmarks of time when I know something happened. So, you know, we built a new home that we moved into in 2010. And I move backwards from that. I know I went to see my doctor for concerns about my lungs back in late

'08, so moving backwards from that I know that, you know, in certainly '06 and '07 we had a walking regimen, couple, two, three times a week. It was a great time for us to, you know, hold each other's hand and walk through the neighborhood and try to get some exercise.

Q. Did you even begin to experience chest tightening before that time?

A. You know, so I know this has come up a little bit, so back when I was in college, I had an episode where my heart was not in rhythm. I could feel it in my chest not beating as it should. And I went to, you know, little Mount Pleasant Hospital, and an internist was on, and, yeah, you're in atrial fibrillation. I didn't know what that meant. I just knew my heart wasn't beating correctly.

And at the time they gave me some kind of a drug, and my heart went back into normal rhythm. Great. And I thought that was the end of it.

But I actually continued to have from time to time -- and it was always precipitated by drinking something really cold like a Slurpee or an ICEE. If I would drink that really cold, shoot, I'd drank it too fast, and it would go out of rhythm, and they would do a number of things to try to get me back, you know -- they would massage my neck, my carotid I guess. They would do a number -- or try this drug or that drug and then, you know, sometimes it would work, sometimes it wouldn't.

Q. Last year they did an ablation, and has that so far taken care of that problem?
A. So they -- I was complaining of -- and so I didn't know what it was. Was it my -- was it my lungs? Is it my heart? I don't know -- I feel a tightness in my chest. And I can remember complaining to my primary care doctor, Dr. Switzer, you know, early on, I mean, back in early 2000s, man, I just -- I feel this tightness in my chest.

But because I had a history of atrial fibrillation, I think in his mind he always thought, okay, it's something cardiac, and he would send me to the hospital for -- you know, or do an EKG in his office.

But, you know, in the back of my mind now today I wonder were those early signs that I was beginning to lose some lung function well before 2008.
Q. So we'll ask Dr. Pue about that. But in that regard you were having some type of symptoms before. But have any doctors ever associated your loss of lung function with the atrial fibr -- I can't even say it, atrial fibr -- say --
A. Fibrillation.
Q. Atrial fibrillation, close. Any doctor at all ever diagnosed your lung problems as being related to this heart difficulty?
A. You know, not that I -- no, not that I'm aware of. And, in fact, so I can remember, you know, wearing this cardiac monitor

little box. They put the electrodes on your chest. You got this little box you wear. And this was back, I want to say, in 2012 because I kept complaining, man, my heart is just -- it's more out of rhythm than it's in. And that combined with my lung function, I was not feeling real good, you know. So -- really lethargic and trying to work.

And so they put this monitor on me, and they came back and said, yeah, you're somewhere between 20 and 25 percent of the time they call it -- they called it a load. Your cardiac load is out of sync. Okay. Well, what do we do? Well, we have this new procedure. It's called a cardiac cath or ablation where we actually go in. We identify the part in the cardiac wall where this electrical beat is coming from, and we just microscopic -- microscopically ablate that little area, and it stops. You know, if that could be part of my history and not part of my future, I'm all in.

So they did that. They went in, and they ablated a little part of my heart. I was released the next day. And, you know, I think someone said something about, you know, I felt like night and day. Not night and day from the standpoint of, oh, I can take a deep breath, and I feel great. Night and day because my heart is in rhythm, and I remember telling my pulmonologist, well, how do you feel now? I feel much better, night and day. My heart is in rhythm. Had nothing to do with my breathing. My breathing was still the same.

Q. And no doctor to your knowledge has ascribed your heart to your breathing problems.
A. No.
Q. And we're going to talk to Dr. Pue about that, the pulmonologist, that's coming next as to whether or not those two things are related. I -- so we'll see what he says.
Now -- now let's talk about -- let's talk about your medical course of trying to figure out why you were having difficulty breathing. Tell the jury how you went about trying to discover what it was that was causing you to have breathing difficulties.
A. You mean when I began to seek treatment?
Q. Yes.
A. Yeah. So I'd been with the same primary care doctor since we moved back in the late -- in the early '90s. So I've known Dr. Swi -- well, even before, so I've known him, you know, 20 years or so. And I remember going to him. And I'm like, Rick, this isn't getting old. This isn't -- this isn't me being out of shape. Something is wrong. I go up a flight of stairs, and I can't get it back. And I've tried working harder. I've tried doing more exercise or what have you to get this thing back. It's not coming, and as I try to exercise, it gets worse, so what's going on?
And a primary care guy by -- by job description is not a specialist. So, you know, and I also said, "And I've got dry

mouth really bad, and I got this lump in my throat, and I'm not sl -- and I'm so tired, Rick. I'm so tired." Well, let's get you over to see -- and honestly I don't remember who he sent me to first. I don't know if it was the rheumatologist or the pulmonologist or the ear, nose, and throat guy. I don't remember. At that point it's just kind of I'm just running around going physician to physician.

And ultimately I know the ear, nose, and throat guy said, okay, this -- he did a biopsy -- that was painful -- and put me on major doses of different antibiotics, and it wasn't working. And it was fairly large. And they said, "We're going to have to take that thing out." And my primary care doc, Switzer, you know what, Dave? This is probably going to solve everything. You won't be short of breath anymore. Your dry mouth will go away. I'm sure they're all connected, so it was a submand -- I don't know. A gland right here. And they took it out, and the dry mouth went away. And -- but the shortness of breath was still there.

So now he's sending me back to the pulmonologist, and I would say to the pulmonologist, you know, I can't breathe, I can't catch my breath. He'd put this little thing on my finger to try to measure oxygen in my system and, you know, have me walk up a flight of stairs, and it would get down into the 80s. He'd be, okay, okay, sit down, sit down. And he -- you know, I would complain about other symptoms I was having, you know,

shortness of breath but, you know, really lethargic. Well, you should probably go see this rheumatologist about that.

Well, you know, I don't know what these guys do. I don't know, I mean -- in fact, before I heard the definition of a rheumatologist yesterday, I was never really sure what they did because they're outside of the types of physicians I had interacted with. So you need to go see your rheumatologist here.

So I go see this rheumatologist, and he's -- you know, he's feeling my joints and around my neck and, jeez, Dave, you know, I don't see anything there. I guess we'll -- I guess we'll put you on some prednisone. So he's actually the guy who began to prescribe prednisone for me.

And, you know, and again, I'm the guy who's thinking, well, it's just like an antibiotic, you know. It's a pill I'm going to take, and I'm going to feel good. I'm going to feel great.

But little did I know they had me on massive doses of this stuff. Later, a year or so later, they began to tell me this is really unsafe. We need to get you off of this and taper you off of it. So I'm sorry.

Q. So you went to a variety of specialists. We've heard about most of them. Could any of them diagnose you with what was causing your shortness of breath?

A. So frustrating. So frustrating. You know, I can

remember -- so I'm seeing Dr. Harrison now with some degree of frequency, every few weeks or so.

Q. That was the pulmonologist?

A. Yes. He's doing chest X-rays and CAT scans. I mean, they're drawing tubes of blood like crazy, and that was pretty daunting. I'm thinking, my gosh, I'm that guy. I'm that guy that, you know, I'm in a hospital as a patient more than I am doing my job. That was -- emotionally that was interesting. And I'm youngish.

And I didn't want my wife to see that I thought I was really beginning to struggle. So I did try to insulate her from as much as possible because what good would it do? You know, knowledge in that area is not going to help her.

So yes, nobody knew. Nobody knew. And I'm running from pulmonologist to rheumatologist to my primary care guy and just -- and they're running tests, and finally they do a bronchoscopy where they put this tube -- you know, they put you to sleep, put a tube down your throat, and they try to get a piece of your lung tissue, and they came back, oh, Dave, you know, it showed some things, but it didn't show some things. I really don't know. What do we do?

And I'll never forget saying to my pulmonologist, "Dr. Harrison, well, shoot, let's just do a lung transplant and have this thing be over." And he looked at me almost cross, Dave, that's not funny. That wouldn't necessarily solve your

problems, and that may be where we go.

And that was the first, oh, my -- my God, this is serious. It was scary.

Q. When did someone first use the words bronchiolitis obliterans to you?

A. So I want -- again, this was another landmark. In August of 2009 -- so I had -- you know, I had originally seen my physician back in the fall of '08. Now it's August of '09, you know, tubes of blood, CTs, X-rays, all this different stuff. I'll never forget being in my pulmonologist's office, Dr. Harrison. And again, we're reviewing my symptoms and how's your cough, and, you know, your PFTs. And now I know what that acronym means, you know. It's a pulmonary function test. And your numbers are this, and they're going sideways and they're -- and he looks up at me and this look of horror on his face. Dave, excuse me, I need to leave the room. I'll be right back. I need to make a phone call.

He comes back in the room. He said, "Dave, I did some transplant work as a resident down in Chicago where a c -- a problem with lung transplant patients was a disease called bronchiolitis obliterans. And I'm sorry to tell you, but I think that's what you have." I said, "Well, why are you sorry to tell me that?" And he walked over, and he took my hand, and he s -- he said, "Dave, this is neither treatable, and it's progressive." And I said to him, "Am I gonna die?" He said, "I

don't know," he said, "But I suggest you get to Mayo for another opinion right away. I don't know what's going to happen."

How do you -- where do you go with that? So I get in my car, and my wife was waiting for me. Call me when you get out of the doctor's appointment. Call me. Let me know what's going on.

I didn't call her. I went home. And, you know, honey, it's -- I'll never forget it. Honey, it's not good. There's the name of this thing, and he actually gave me two options. One was they could put me to sleep, go in through the side of my rib with a thoracic surgeon and get a sample to validate the diagnosis or go to Mayo Clinic or some other place and get it validated. And in my mind, perhaps yours too, the Mayo Clinic was the place that you go to.

So in talking with my primary care physician, he said, "Dave, don't do the thoracic surgeon thing because, you know, they're just going to essentially do the same thing at Mayo. Don't go through this thing twice. It's a bad, ugly procedure."

So, you know, Barb and I decided to go to Mayo. But we went to --

Q. And did they confirm the diagnosis?

A. It was a terrible experience. I mean, you know, you don't know this going in, but everyone at Mayo by and large are there looking for a miracle. They're there to have the diagnosis that they're there with to be refuted. Oh, no, no, no, no. Here's

what we can do. Your local doctor was wrong. That was our hope.

But, you know, everyone walking around that town, it's depressing. Everyone in the restaurants, you know, people wearing masks so they don't infect others or don't become infected, I mean, it's depressing.

And we were there for a few days, and actually in the process of them taking a sample of my lung they collapsed my lung, and I remember going into the Mayo ER at 5 in the morning (demonstrating), really can't breathe now, and physicians all around me, and they're putting tubes in places, and it was scary because there was many physicians all around me, and, you know, they're asking questions -- I'll never forget one doctor saying, "What size IV do you have on the right?" And he told me. It's something French. And I think the smaller the number the bigger the bore or the size. And I knew from some medical background that I had that they were thinking I'm going to crash. He said, "Well, let's get another one a little larger on the other side." And I'm kind of in and out of it, but I'm thinking -- and I can see my wife in the corner bawling. And I'm thinking this is -- this is it. I actually got admitted to ICU there from a procedure they did.

Q. From the lung biopsy that they took.

A. Yeah. But yes, they confirmed the diagnosis.

Q. But ultimately they nearly killed you to confirm the

diagnosis.
A. They did.
Q. Was anyone ever able to confirm for you what the cause was in terms of your local doctors that were treating you?
A. So this was very frustrating because, you know, they could use the term bronchiolitis obliterans or BO, and they would throw this around like, hey, we've identified this thing. Well, what are the treatments for it? Well, Dave, we have you on this cocktail of drugs, all these various drugs. And, you know, we're just going to try to sustain you. If we can -- if we can mitigate the decline and level you off, that's a victory. Okay. Okay.

But now you're processing, wait a minute. So I'm not going to play get with my kids anymore? My life is now forever changed in the course of the last two years, forever changed. But the doctors locally were like, look, we have you on this cocktail of drugs that Mayo suggested, and we're just going to stay the course.

Q. And no one was able to tell you a diagnosis of what was causing your disease.
A. Well, so at this point we're still talking about treatment; right? So I'm, you know, smart enough to know that the Internet is a great resource. So I'm on the Internet, and I'm, you know, treatments for bronchiolitis obliterans, and I'm doing homework.

And I'm thinking, well, you know what? I'm fully

willing to go to Arabia if necessary recognizing that the FDA doesn't always clear things as quickly as other places do, United Kingdom, France, wherever.

And I remember finding a physician in Europe who was doing some unique things with bronchiolitis obliterans patients. And I e-mailed him. He never replied.

So, you know, through the course of 2010, I really was just trying to find are there other treatments? I'm calling Mayo back. Has anything changed relative to what you're seeing because they really seemed to me like the repository of all intellect for this disease. And if they didn't know of something new, who would? I didn't know about National Jewish or other hospitals that were really further along until I began to do some other homework.

And I would talk to my pulmonologists about, you know, hey, you know, National Jewish is doing this and some hospital in Pittsburgh, UPMC, is doing something else. And what do you think? Well, you know what, Dave? The regimen we have you on, we've leveled you off. You're not losing a whole lot more. The steady downgrade that you were on has now been somewhat mitigated. You have highs and lows.

So they were like -- it became clear in late fall of 2011 that this was it, and they began to tell me that, you know, there's a chance, Dave, you're going to need a lung transplant. But we'll talk to you more about that as we get closer. There's

no sense in freaking you out about that.

So then in early 2011, my mind, okay, I Googled to death treatment options. Now I want to know what caused this thing. And, you know, so, you know, you Google bronchiolitis obliterans. And they talk about lung transplants. Hadn't had one. They talk about exposure in industrial facilities. Never been there. So I'm checking out the boxes here. That's not me. That's not me. And it wasn't far down the page. In fact, I just checked the other day. You can do it yourself.

Q. No, they can't.

A. Oh. Oh.

MR. MCCLAIN: Right, Judge?

THE COURT: That's right.

MR. MCCLAIN: That's right. Okay.

A. Well, it's there. Sorry. I don't know if it's illegal here. But, you know, halfway down the page beyond WebMD and some other hospitals that deal with bronchiolitis obliterans, it said popcorn lung. What? Clicked on popcorn lung. And it showed pictures of these lungs that I had seen in my CT images. I mean, I sold these CTs. I was looking at my images, and I'm seeing these glassy images. I'm going, that's -- that's -- that's me.

And so I'm reading about these people who had been exposed to microwave butter-flavored popcorn, and it created issues in not only the workers but some consumers who ate or had

been exposed to a lot of microwave popcorn. And it was somewhat satisfying, although later it was like, are you kidding me? But I remember getting Barb, going to Barb, walked up from my office. Honey, look at this. I found it. Popcorn lung. Look at. It's in microwave popcorn. We still had it in the pantry. And I'm, oh, my God.

So I can remember -- you know, I mean, so, I mean, that was like a Rama moment. That was like a ray of sunshine. I found a cause. Maybe now there's a solution. If we can match up the two, maybe there's a way out of this thing.

So later on as I began to -- and then I went -- started Googling popcorn lung. And you start seeing all these legal cases of people who have been harmed and workers and consumers, and I'm thinking that's me. That's me. And there was an opportunity. You know, they talked about some physicians who have been in here, and they talked about a law firm who was very skilled and understood this stuff. I'm not looking for a law firm. I'm looking for a solution. I'm looking for someone who can direct me because my local physicians aren't very helpful. They're not very skilled at this. It's very rare.

So I remember calling your firm and talking to a guy. I just said, look, I've got that bronchiolitis obliterans. Can you tell me about some physicians who have some expertise in it?

Q. And so was your first inquiry to our firm is are there physicians that can tell me whether I have this or not?

A. You -- yes. It looks like you have some experts who at least understand what it is.
Q. And at that point in time were you thinking lawsuit?
A. I'm thinking help me. I'm thinking you might have the golden ring.
Q. I mean, did we tell you we'll help you whether you're our client or not, and did we ask you to go be evaluated to see whether or not this was the -- or did you ask us to send you to one of these doctors?
A. I was curious. I'm like, are there people that you have that I can go talk to?
Q. Yeah. And so that's the way that you first got in contact with Dr. Parmet first and then Dr. Egilman later and then Dr. Pue.
A. There was never any discussion about a lawsuit. I'm not look -- I wasn't looking for a lawsuit. I'm looking for a solution. And again, my local guys, great guys, but so rare, this disease is. They didn't know. And so, you know, I would have traveled anywhere, and you guys had people who knew about what it was, and you were very gracious. You helped me.
Q. I mean, and even last night when Dr. Pue arrived, did you spend time with him just asking questions about your condition, and was Dr. Pue open to talking to you about all of the different options that might exist?
A. You know, these are some great people, Egilman, Pue,

Parmet. These are some great people who, I mean, in reality, there aren't -- this is troubling, folks. But there aren't many people out there who are trying to do work to reveal harm in the marketplace. Who's going to pay them to do that, you know? Is the microwave popcorn company going to pay them to find out if what we're doing is okay? They're not going to do that.

So -- I mean, so here were some experts in the field who were essentially getting funded by grants or by doing work for law firms who were developing expert understandings. I mean, these guys are from NIOSH and OSHA, CDC. These are some talented people who were able to come back and say, hey, here's what's going on. I mean, to me that was the beginning of a life ring.

Q. And so in this regard then knowing at least what you have has answered that question but has not been very satisfying.

A. You know, so great people, very empathetic people. And my question is always the same. What's new? What do you know? What's different? What's changed? You know, prednisone is an ugly, ugly drug. And, in fact, you know, I'm supposed to be on five milligrams a day which isn't a lot, but it seems to be a therapeutic level. I used to be on 40 or 50 or 80 a day which is crazy. Weight gain, weight loss, mood changes, irritable, honey, I'm so sorry, but I was a grumpy guy. But even through the course of this trial, I've doubled my prednisone from five to ten just so I can stay awake in the afternoons because I have

to listen to this. I have to know what's being said. I'm not sure I answered your question.

Q. No. But that was helpful because the question I have is this. We heard that you're having some mental fatigue problems that may be contributed to by the drugs you're on but mainly because you're so low on your reserves of oxygen. You have these word retrieval problems as the day goes on more so?

A. And the longer I talk, I get more hoarse.

Q. And is that why you asked for permission to testify in the morning? Are you better in the morning than the afternoon?

A. I'm -- yes.

Q. So let's talk about something a little bit off topic just for a moment, but it was raised in opening. I asked Barb about it. This question of trying to do the work to answer the questions that the defendants were asking you, did you try to do a good job of that?

A. You know, I -- and perhaps this is out of bounds but --

Q. Well, then don't -- don't -- let me ask you a different question and --

THE COURT: How about this? Asking it after the break.

MR. MCCLAIN: Okay. That'd be great.

THE COURT: That okay?

MR. MCCLAIN: Yep.

THE COURT: Thank you. Members of the jury, we'll be

in recess until 10:30. Thank you.

(The jury exited the courtroom.)

THE COURT: Anything we need to take up? Anything we need to take up?

MR. GUNN: I'm not sure where this takes us. These interrogatories that he's referring to were propounded by General Mills, not IFF.

MR. MCCLAIN: But, see, then why have you raised this question of missing evidence? If it's not relevant to this case, why have you raised that and sought an instruction that he be sanctioned for it, Mr. Gunn? If you're withdrawing that allegation, we can get off this. I would like to do that. But you made the allegation, and you're probably right. You probably do not have standing to raise it because they weren't your interrogatories to start with. So that's an excellent point.

MR. GUNN: My point is when he refers to these interrogatories he needs to be more neutral as opposed to making perhaps an aspersion or allegation towards IFF.

THE COURT: Well, wait a minute. You're the one making the allegation towards the plaintiff that they willfully destroyed documents. That's how I understood it.

MR. GUNN: That's true.

THE COURT: Yeah. And had I actually had a better grasp of what actually happened, there's no way I would have

even proposed the instruction. And I'm probably going to withdraw it in any event but -- unless you got more than -- but I don't know how you can like file a motion for sanctions and then turn around and say but it's somebody else's interrogatories, like excuse me? How does that work?

MR. GUNN: We were party to the litigation.

THE COURT: So what's your point?

MR. GUNN: My point is -- well, I hadn't heard all the questions.

THE COURT: Okay.

MR. GUNN: But it sounds like he was suggesting that maybe IFF had put some undue burden on them, and IFF --

THE COURT: Well, that's what cross-examine -- I don't think he suggested that, but that's what cross-examination's for.

MR. MCCLAIN: Judge, maybe on the break would you consider a withdrawal instruction because I don't think it is submissible?

THE COURT: Well, they've gotta be able to put on their case. You know, at some point I'm going to consider it. I'm not going to consider it now. I'm going to go have a doughnut.

(Recess at 10:10 a.m.)

MR. GUNN: Your Honor, 20 seconds.

THE COURT: Yes.

MR. GUNN: I've told Mr. McClain that I'm completely satisfied with the explanation I got yesterday from Miss Stults, and I'm going to withdraw that spoliation.

THE COURT: Okay. I think I'll -- when do you want me to do it?

MR. MCCLAIN: I mean, I think I'd like to -- I'd like to do it now because I want it off the table if it's going to be withdrawn so he doesn't have to address it and you say, ladies and gentlemen, I'm withdrawing -- I gave an instruction at the beginning about the notes the family took. That issue's off the table in whatever way you want to phrase it.

THE COURT: Do you want me to say by mutual agreement of the parties?

MR. MCCLAIN: Sure.

THE COURT: Or what do you want me to say?

MR. GUNN: That's fine.

THE COURT: Is that okay?

MR. GUNN: Yeah.

THE COURT: By mutual agreement of the parties and with my consent, something like that?

MR. GUNN: Sure.

THE COURT: Okay. That's fine. Let me find that instruction. Why don't you bring the juries up -- the jury up.

(The jury entered the courtroom.)

THE COURT: Please be seated.

Members of the jury, I have one issue to take up with you. So if you would take your jury instructions and go to instruction number 3 which is definition of evidence which starts on page 4 and then go to pa -- the bottom of page 6 and where you see there missing evidence on the bottom of page 6 and then that runs on to page 7, by agreement of the parties and with my consent, this instruction is being withdrawn. And so you can just take a pen and cross out that bottom part on page 6 with the heading Missing Evidence and everything on page 7, and that's no longer a disputed issue in the case; okay? Thank you.

Mr. McClain, whenever you're ready to proceed.

BY MR. MCCLAIN:

Q. Now -- so let's -- that's done with. Let's talk about something else. Have you ever had any joint pain or anything you know to be associated with rheumatoid arthritis?

A. No.

Q. And about your mom, did she ever have rheumatoid arthritis?

A. No.

Q. Let's talk about -- let's talk about your work then. You've talked about, you know, your discovery and how you came to know that this was microwave popcorn. But I want to talk about the conditions leading up to -- it wasn't really retirement. It was really your doctor said you couldn't work anymore, Dr. Switzer; is that right?

A. Right.

Q. So you wouldn't have retired voluntarily. Dr. Switzer said you can't do this anymore?

MR. GUNN: Objection. Leading.

Q. Well, let me ask you. What did Dr. Switzer tell you?

A. So I went to Dr. Switzer in February of this year, and I just -- I said to him, Rick, I just put a valiant effort in January to do everything I could. I tried working an entire week attending meetings. I'm looking at notes that I've taken from meetings, and if it weren't in my handwriting, I wouldn't have said I wrote that. I'm looking at notes, and I'm thinking I don't remember doing that. Rick, I'm walking into meeting, and they're, hey, Dave, you were going to get such and such a spreadsheet together. Did you do that? I forgot. I forgot. So I just said, "Rick, I don't know if we need to tweak the meds or what we need to do here, but I'm failing professionally and I'm not -- I'm not feeling well."

And his comment to me -- we went out of the exam room and into his office. And he said, "Dave, so I never wanted to plant the seed in you that this would come to pass. But I knew that this conversation would come, this day would come, when I would tell you that you need to stop. And let's just talk about how you're feeling."

And we spent maybe an hour in his office just talking about, well, what is this -- what do you mean, and what is it going to mean for me, and how do I do this? And he said, "You

know, I'll support you, I'll help you, but clinically, Dave, you've come to the point where you're beginning to do more harm to yourself." That was in February.

Q. And that's why you're no longer working at GE. It's not some choice you made. It's your physical condition.

A. That's correct.

Q. All right. Now, but before this happened, what -- can you tell the jury the difficulties you were having? I mean, let's tell them about your success. You were the role model for the company. That's a special position within GE.

A. So one of the reviews I had -- I think it was 2011 or '12 -- and keep in mind that this kind of large capital dollar business, this isn't something that a hospital decides to do in February, and then they order the equipment in March. I mean, these are typically well-planned-out, thought-out projects that could be years in the making. We're going to build a new wing. We're going to add a children's hospital, what have you, so they take years to plan out and to help the customer through the process of planning, site planning, what have you.

So all of that culminated in, I think, either '11 or '12 where all these huge deals came together, and I was -- my review with GE has a range of, you know, from needs improvement and you're probably going to get fired to role model. Role model is the top 1 to 2 percent in the entire company. It's maybe, you know, a hundred employees out of the 40,000. It's a

very small number.

And I was very blessed. I was given the role model accolade. It's interesting because I was beginning to -- I knew I wasn't performing at my highest level, but it just kind of culminated in these deals all coming together at one time.

Q. And so the very next year, how was your performance?

A. So for the first time ever -- so I think this would have been 2012, the first time ever, I didn't hit my quota or budget, my assigned business that I was to bring in, the first time I can ever remember performing less than what was required.

Q. By how much were you off?

A. Almost half.

Q. And what about the following year?

A. It became even worse or as bad, didn't hit my number. And that would have been 2013.

Q. And at GE, is it pretty much not what have you done but what have you done for me lately?

A. You know, I think the role model accolade helped me a great deal in breaching buying more time. And I had -- you know, they would -- they would bring me in because I was a little older. They would bring me in to speak to the new kids they were hiring to talk about what does it take to be successful in this industry.

So every hiring class I was brought over to Milwaukee, corporate headquarters, to this group of, you know, 10 or 20 of

some of America's youngest and brightest and just tell them, you know, what's the real world like at GE to be successful and how are you successful. And so now here I was that guy who was no longer being successful. And it was very difficult.

Q. Talk about some of the physical things that you encountered and the way that you tried to cover it up to your customers and to your coworkers during this process.

A. And I didn't even realize that my wife knew that when I was stopping and looking in windows I was catching my breath. But it was a coping mechanism I guess for lack of a better term. But, you know, I would go so far and then I would -- if I was in the hospital, you know, I would just turn to the --

Q. Hospital on your job, not being treated.

A. Yes, yes, thank you. If we're walking from, you know, one campus to the next, I would say, well, you know, let me meet you over there. I need to run to the restroom or, you know, I parked my car on the other side. I'll meet you over there in ten minutes or something or, well, let's just walk up this flight of stairs. You know what? I got this bum ankle. And I did. I tore my ligaments in my ankle. I rolled my ankle. I got this bum ankle, and they're telling me not to take stairs. So it was a way for me to -- and it was real. I mean, it was true. They -- you know, stairs were painful, but they were also -- they were bad.

Q. You didn't want to see -- you didn't want them to see you

out of breath from one flight of stairs.
A. It only happened once. I was with my boss, and we were in the -- a new children's hospital, and the elevator was taking too long. And he said, well, let's just take the stairs. Okay. And it was a full flight of stairs meaning, you know, in a commercial building -- I don't know -- ten steps, landing, ten more steps. And I got up to the second st -- second landing (demonstrating). He said, "Are you all right?" I said, you know, "I've not been feeling well lately. Maybe it's the flu." But, you know, I ultimately just told him, I said, "Look, Dan, I'm having some lung issues and doing pretty good today. Today's a pretty good day. Some days are better than others depending on humidity or hot or cold. But, you know, so yeah, sorry, stairs aren't a great idea."
Q. Let's talk about the impairment with your other physical activities. Are you able to skipper a boat any longer?
A. N -- yeah, no. So we -- hmm. This has been a journey of what can we do instead of. What can we do to be with the kids, to do what we enjoy, changing what we enjoy. My wife loves antiquing. Shoot me, you know. I don't really -- I never really enjoyed antiquing. But you know what? I'm finding that I do. I'm learning that spending time with her and walking through antique stores while certainly wasn't anything I would have enjoyed, you know, ten years ago, today, you know, there's some interesting things out there. And that's who I am today.

And, you know, praise God I'm able to walk up to that place slowly and walk through that little antique store. So we're changing what we do to enjoy each other's company.

Q. But the golfing as an example.

A. You know, the problem with golfing is that the ball never goes right down the fairway, and I don't care how good you are. And, you know, oftentimes golf courses would have a rule, you know, a 90-degree rule; you can take the cart across 90 degrees, but you can't take it up to your ball. And so I tried a couple times. You know, you'd park the cart, and you'd walk down the hill, and you'd hit the ball. And going down the hill was no problem. Coming up the hill was a challenge.

And so I'd spend -- and the guys would be like, you know -- and they knew, you know, hey, I'm struggling, so they would give me some grace, but they're like, Dave, seriously, come on. And so I knew that, you know, my days of golfing with my friends which had been, you know, decades, they were over. And that's hard.

Q. The winter sports, is winter worse for you than summer?

A. You know, it's interesting, you know. If it's really, really cold -- and I don't know what it's like here in Iowa. But, you know, I see the news. Sometimes you guys step outside and it's pretty cold and it catches your breath. That's tough for me. At the other end of the spectrum, if it's really humid and hot, that is equally tough. I don't know where that happy

place is in terms of humidity or heat, but either direction is tough.

Q. Now, what about even, you know, the simple things, Dave, like laughing too much?

A. So this is getting worse. You know, I love to laugh. I love humor. I love having fun with my friends. And, you know, just a couple nights ago most recently, you know, I was out for dinner with my brother and Lee Brouwer, my friend who you met yesterday. And we were having dinner. And somebody said something funny. And I -- you know, when you laugh, you lose your breath if you laugh deeply. And this wasn't just a chuckle. This was a, you know, loud, hard laugh (demonstrating). And you lose -- you lose it. And (demonstrating). And I get this rattle, this wheezy rattle right here, and I can't clear it, you know, by tr -- it's just there. And it gets a little scary.

I think someone described it as -- I think Kathie Allison described it as, you know, it's almost like losing your breath under water. Am I going to get it? Sometimes I feel like a deep yawn, you know, sometimes a deep yawn will replenish you and you feel (demonstrating), oh, I got that deep breath in. But it's been explained to me that I'm trapping so much air that it doesn't get out. So even when I try to take a take a deep breath, it doesn't do much for me because there's already too much air in there. I don't know if that makes sense.

Q. Well, we'll ask Dr. -- we'll ask Dr. Pue about it. But do you feel -- I mean, Dr. --

MR. MCCLAIN: With permission, Judge, can I get this?

THE COURT: You may.

BY MR. MCCLAIN:

Q. I mean, Dr. Egilman showed us physically -- Dr. Egilman showed us physically what's going on in your lung. How does that feel to be in this condition? I mean, can you describe it for us? What's that feel like to have to breathe through that narrow opening?

A. I'd never heard it said before. Dr. Egilman put it beautifully, and it really illustrates it. He said it's like breathing out of a straw and -- a thin straw, you know, not the kind of straw you get at 7-Eleven with your Slurpee. It's like the coffee stirring straw. (Demonstrating). You're just -- you know, there's times where you're just trying to catch your breath always.

Q. And I want to be -- I want to be sensitive to this because I know how -- how difficult it is for you and Barb to talk about this. How has this affected your relationship to each other physically?

A. You know, I didn't know when -- when I was joining that choir what a prize I was getting. You know, my -- we've had issues in our marriage. I think most people do. I think every house has their stuff that they're working through. But she has

always been so gracious towards me and helpful. She's an amazing woman. I don't know whatever I did to deserve somebody like her. But we do have challenges with intimacy and --

Q. I mean, it's not that you don't find her attractive any longer. You physically together as I've observed you have great affection and . . .

A. I think she's stunning. No, we just struggle, and we work through -- again, some days are better than others, and we get through this as best we can. But that is one amazing woman.

Q. Let's talk about something that you are looking forward to, that is, your grandchildren. Tell us about that.

A. You know, I didn't realize that my brother Ken saw me, so he has two little grandkids and just had a third. And my kids are not yet married, so we don't have any grandkids yet.

But you begin to look towards the next generation of how whatever you didn't do with this one you want to do with the next one or if you did some fun things, you want to do them again and kind of continue that legacy of playing get. You know, I watch him get down on the ground with his little girls, whatever, and I can't do that. I know I'm not going to be able to do that.

And again, Barb is awesome. Well, Dave, we'll find something else, you know. Maybe you can roll around on a -- maybe not on the ground but maybe on a bed and play with them or, you know, whatever.

So this now is a life of making -- I can't think of the word -- you're making allocation for your -- you're finding something else that will fill that space. So the things that I had looked forward to doing and having are now out. But I'm not going to give up. I'm not going to give in to this thing. And I will continue to find ways to interact with these kids.

I think the most troubling thing, Ken, was -- and I see this all the time. Barb and I were having dinner the other night, and there was a gentleman celebrating his 82nd birthday, and, you know, some people 82 are older than others. And he was an older 82, and they were kind of walking him through. His wife and his friend were talking him through things.

And I thought, you know what? I don't even know if I'm going to get there because they -- I heard them say 82d birthday. And I thought if I -- and if I do get there, will I be even less than he is? Will I have less on the ball? Will I have had a lung transplant and that 15-year clock has begun because, you know, 50 percent of the people die in the first year and the best they hope for are, you know, maybe 15 years? And I don't know how far out we go.

Q. Are you -- are you apprehensive about the prospects of a lung transplant?

A. You know, first of all, I have great faith in my God that hopefully I'll never need one. You know, my current treating pulmonologist, Dr. Schmidt, has begun to talk to me about, hey,

Dave, you know, mentally, emotionally when you're ready, it's probably a smart thing to go over to University of Michigan and get involved. It's better to do it while you're healthier than when you're sick so that they can run all the tests and get you in their system. But I need to warn you, Dave, that emotionally, I mean, they're going to walk you through because they need to make sure you're going to be a good candidate. They're going to walk you through what this is going to be like, and it's a very major operation. And, you know, I'm -- first of all, I'm choosing and hoping that it never comes to pass. That's where I want to stay today.

Q. Have they -- have they told -- well, we'll talk to Dr. Pue about this, about the success rates and what that means ultimately. Dave, let me just ask you this as a final -- as a final question. Is it your desire to continue to stay active and do as many things as you can for as long as you can in your life?

A. Well, you know, of course. And I will -- you know, the funny thing about your lungs is they aren't a muscle that you -- you know, it's not like I can -- if I worked harder I'd get better. It's not like having discipline where if I just lifted more weights or did more pushups if I even could that I could restore this stuff. Once it's gone it's gone. And if your disease is progressive, even though they've, I think, mitigated some degree of loss to some degree, it's likely going to

progress. And so, you know, we're -- we're doing all we can right now.

You know, we -- Barb and I had promised each other on our 25th anniversary, I don't know if we'll afford it or not, we're going to go to Europe, we're going to go to France and Italy, and we're going to walk those -- she's a history buff. And, you know, we did it, you know. I mean, we got to Mount Vesuvius, and my son and my wife went to the top, and I sat there and had a Coke at the base of the mountain. I couldn't climb up that thing, but I was there, you know, I was there.

And yeah, we -- you know, we're not doing some of the things that some of the tourists do in those places, but we're able to slowly walk down some of those streets. And so it's just a life of allocation, you know. You give that up, and you take joy in the little things.

MR. MCCLAIN: Thank you, Dave. No further questions, Your Honor.

THE COURT: Mr. Gunn?

MR. GUNN: Thank you, Your Honor.

CROSS-EXAMINATION

BY MR. GUNN:

Q. Morning, Mr. Stults.

A. Good morning.

Q. You understand, don't you, that IFF does not make or sell microwave popcorn?

A. I leave all that stuff to my attorneys.
Q. Okay. In the past you were asked about microwave popcorn consumption. And you stated that in descending order which I take to mean starting with the most going down to the least --
A. Uh-huh.
Q. -- your history was General Mills Pop Secret Butter that contained flavors from Symrise and Givaudan; ConAgra Act II Butter Lovers containing flavors made by Symrise and Givaudan; American Pop Corn Jolly Time Blast O Butter containing flavors made by Sensient, ConAgra; Orville Redenbacher which contains flavors made by IFF.
A. Uh-huh.
Q. ConAgra II Butter which contains flavors by Chris Hansen, General Mills Pop Secret Movie Theater which contains flavors by Firmenich. You don't have any reason to change that, do you?
A. No.
Q. And you've also stated that all of those people that I just named sold or had a role in popcorn that was in a defective condition and unreasonably dangerous to the user or consumer when used in a reasonably foreseeable use; correct?
A. That's not my language. That's legal language.
Q. But that contention has been made on your behalf.
A. That what? I'm sorry.
Q. What I just read, that accusation was made on your behalf.
A. Yes, it was.

Q. Okay. So, I mean, you've blamed a lot of companies in addition to IFF.
A. We were eating different popcorn from different people throughout the course of time. We had our favorites.
Q. And you had three brands that you liked better than Orville Redenbacher, that being General Mills Pot Secret, ConAgra Act II Butter, and American Pop Corn Jolly Time Blast O.
A. So we would buy different things at different times. And I think we were asked to put into some kind of order, you know -- I think we did the best we could. You know, again, I think I commented about Orville Redenbacher. I like that guy. I thought he made a great quality product, and I know we ate a lot of it.
Q. Okay. I want to talk with you for a minute about your medical history. You know because I guess you signed some authorizations that we got your medical records from your treating physicians; right?
A. I signed some releases, yes, I did.
Q. You first had your -- you had your first cardio conversion sometime between 1994 and '96?
A. If that's in the records, that would be true.
Q. All right. In May of '97 you went to see Dr. Switzer complaining of chest pain, mild shortness of breath, and increased stress for the last six months.
A. Okay.

Q. Not to go through them time and time again, but you had perhaps as many as seven cardio conversions?
A. I don't really know how many times.
Q. Okay. In 2005 you had a cardiac catheterization?
A. Interesting. So -- I've talked with Dr. Switzer about this since, and the question was, you know, Rick, when I was coming to you with feeling tightness in the chest, was that -- I mean, we always thought that was my heart because I had had some atrial fibrillation histories. Could it be that those were, you know, the beginning onset signs of this bronchiolitis obliterans? I don't know.

So this cardiac cath that I did is because I was presenting with signs of, you know, shortness of breath and tightness in my chest. When you present with certain symptoms at the hospital, there are certain tests that they have to do. And in this case they did a diagnostic catheterization. And I think it came out normal.

Q. Okay. Well, the catheterization was in 2005. The original complaints of shortness of breath were in '97.
A. Okay.
Q. And then in 2006 you reported to Dr. Switzer that your stress level was increasing. Was your job stressful to you?
A. Yeah. I've always been in a very stressful position. I don't know that I -- I think some people handle stress better than others. I don't necessarily think I handle stress very

well.
Q. Okay. In 2012, November 2012, Dr. Schmidt told you that your pulmonary function tests showed improvement and it was the best since 2009. Do you recall that conversation?
A. It was a -- it was a -- it was a good meeting because, again, I'm looking for answers. I'm looking for a treatment protocol that's going to work to stave off a transplant. And, you know, we're always tweaking different meds. So yes, I mean, we're always, you know, different levels of the cocktail.
Q. In November 12 of 2009 there was a letter from the Mayo Clinic that said our final diagnosis is bronchiolitis obliterans possibly secondary to rheumatoid arthritis.
A. So my referring physician, Dr. Harrison, sent in records that essentially that's what he was thinking.
Q. And we saw this yesterday, but in January of 2013, Dr. Schmidt related you were doing beautifully since the ablation, and you told her you were able to bound up the stairs.
A. You know, so bounding for me and bounding for you may be two different things. I know that when they did the cardioversion and I no longer had this load of 20, 25 percent irregular heartbeats, it was a night-and-day experience because I was now -- I wasn't having that kind of chest pressure and irregular rhythms, and I did feel much better. I still had the shortness of breath.
Q. Going to see Dr. Swenson, though, was at the suggestion of

Dr. Ostrander who Mr. McClain sent you to. That wasn't anything any of your treating physicians recommended, was it?

A. My treating physicians knew very little about bronchiolitis obliterans. And the only group of physicians that I found that had history, knowledge, and expertise were the group that Mr. McClain's office was sending me to. So, you know, if they wanted me to see whomever, these were resources that were giving me light and hope.

Q. The people at the Mayo Clinic didn't suggest you get a neuropsychological work-up, did they?

A. I did not have one there, no.

Q. Do you recall taking the Rituxan?

A. I do.

Q. And Dr. Eggebeen noted that you felt great for the first several months after the Rituxan.

A. Dr. Eggebeen was my rheumatologist for a season of time. I stopped actually seeing him several years ago because -- on the advice of my pulmonologist, Dr. Schmidt. Dave, you don't have rheumatoid arthritis. There's no need for you to continue to go to see him. I'll manage your care.

But at that time, you know, when I had the Rituxan, he mentioned to me, look, Dave, whatever we're doing here isn't working. You're continuing to lose volume. You're continuing -- or whatever. Your numbers are getting ugly. So, you know, there's a couple of drugs. And I'm on massive doses

of prednisone. There's a couple of drugs, Dave, we can try, Cytoxan and Rituxan. He said -- and I think he said they're predominantly used for cancer. They're kind of crazy. They're some -- really expensive, and they are -- you know, you have to do it over a period of time, but we'd like to try it. And I did try it, and I thought I felt better. Could be placebo effect, Mr. -- I don't know. I was looking for answers.

Q. Well, it greatly decreased that anti-CCP level. And it is to treat rheumatoid arthritis, and one of the markers of that is the anti-CCP. But whatever --

THE COURT: Well, just a second. That wasn't the question. That was kind of testifying. So I'm going to strike that last statement by Mr. Gunn. And now you can ask a question. Fair enough?

MR. GUNN: Fair enough.

THE COURT: Thank you.

MR. GUNN: I apologize.

BY MR. GUNN:

Q. For whatever reason it was given, it made you feel better, and that's what you related to your doctors, and, in fact, it was given to you again with more success.

A. The second time when you say given to me again, so this was very expensive stuff, I mean, $18,000 per treatment. I did -- and they would do it over -- they couldn't do it all in one IV therapy. They'd have to spread it out over time. And the

second time after the first half so day one I said to the doctor, I said, "You know what? Let's just stop." So they didn't do the second portion because I didn't feel that much better, and I didn't want to spend the money. Even though I'm looking for a cure or cause or a help, that wasn't it.

Q. Your physician was recommending it, but you declined it.

A. We were grasping at straws, and he said, you know, you may find some benefit from this thing. And the second time around I didn't. So we agreed.

Q. Just briefly, when you saw Dr. Pue in July of 2011, at that point in time you had concluded that popcorn may have been what caused your problem, and you knew that your consumption of popcorn was an important issue, and you related to Dr. Pue a 13-year history. Do you acknowledge that?

A. You know, I don't. Again, I've never been good at dates. And it's gotten worse over the last few years. So again, I use landmarks of certain things I remember, the birth of my child, building a new home, anniversary, my marriage.

So I -- here's what I know, and perhaps this will help you. I know that I was eating microwave popcorn before I was married in 1988 on the job at Xerox 1985 or 6. And I know we still had it in our pantry when we moved in 2009.

Q. My question was not what your consumption history was but that you told Dr. Pue it was 13 years.

A. I don't remember what I told him.

Q. And then in November of 2011 you told Dr. Egilman it was 16 years. Do you recall that?
A. I don't. I'm sorry.
Q. All right. In 2013 you told Dr. Pue it was 24 years. Do you recall that?
A. So when doctors are taking your -- I didn't realize when I was going to meet these folks that there was going to be a history. So I'm trying to recall to the best that I can the dates. And keep in mind that I am now on massive doses of prednisone and some days are good and some days are not.
Q. When you went to see Dr. Pue in 2013, you had filed your lawsuit and you knew this was an important issue; true?
A. That what was an important issue?
Q. Popcorn consumption.
A. I didn't know that consumption was the issue as much as being exposed to it.
Q. Popcorn exposure, you knew that was an important issue.
A. Yes.
Q. Okay. And Dr. -- I butcher names sometimes. Dr. Eggebeen, June of 2014 you told him it was a 28-year history. Do you remember that?
A. I don't remember saying that but --
Q. I said June 14. I misspoke. Had to have been 2012.
People that have been your treating physicians primarily, Dr. Switzer's your primary care physician; correct?

A. Yes.
Q. And Dr. Schmidt is your current pulmonologist.
A. Yes.
Q. She followed Dr. Harrison who's no longer seeing patients?
A. That's correct.
Q. And your -- Dr. Eggebeen was your rheumatologist.
A. For a season of time, yes.
Q. And your attorneys hadn't asked any of them to come to court and testify for you, have they?
A. I -- I don't think they have. They're not here.

MR. GUNN: Thank you.

REDIRECT EXAMINATION

BY MR. MCCLAIN:
Q. Did any of those doctors have any understanding of the nature of diacetyl-related bronchiolitis obliterans?
A. You mean my current treating physicians?
Q. Or past treating physicians.
A. Yeah. The only guy that knew anything about it was Dr. Harrison because he had done some lung transplant work as a resident in Chicago. So, you know, again, the only ray of hope that I had, the only people that knew anything -- yes, I know what you're talking about, Dave; I've seen patients with these symptoms -- were the folks that you had referred me to.
Q. And that's not to be critical of your doctors. They're nice fellows and women.

A. Yeah. No. They're good. I mean, we're on a path together now. But they're not experts in this.
Q. And none of them have been able to tell you what caused this.
MR. GUNN: Objection to leading, Your Honor.
THE COURT: Sustained.
BY MR. MCCLAIN:
Q. Have any of them been able to tell you what caused this?
A. No. And, in fact, Dr. Schmidt, my current pulmonologist, she's a sweet lady. And she's very -- she's young and energetic, and I think she's -- she's really open to trying to learn more. You know, when I shared with her information that I had from Dr. Egilman about diacetyl and microwave popcorn and its effects, you know, she read that information. And I can remember her telling me at an appointment, she said, Dave, you know, I saw a patient recently who had symptoms very similar to yours, and because you had shared with me this information, as we were going through her history, I asked her have you been exposed -- have you eaten microwave popcorn, she said, because I was kind of thinking I might catch this thing early. And she had not. So -- again, so Dr. Schmidt I think is really open to learning more. But she's, look, I'm just going to treat you with what we have.
MR. MCCLAIN: Thank you. No further questions.
THE COURT: Any recross, Mr. Gunn?

MR. GUNN: Very brief.

RECROSS-EXAMINATION

BY MR. GUNN:

Q. You heard Dr. Egilman testify here that Dr. Schmidt just threw the stuff away and didn't even look at it?

MR. MCCLAIN: He did not. I object.

MR. GUNN: He did.

MR. MCCLAIN: He did not.

THE COURT: No. Now, now, now, just hang on. The objection's overruled. The jury's going to have to use their recollection of Dr. Egilman's testimony. You may proceed.

A. Would you like me to answer the question?

Q. Yes, sir.

A. So you're wrong. It was Dr. Eggebeen who received the information and threw it away. Dr. Schmidt read it and took it in.

Q. I'm sorry. Thank you.

THE COURT: Mr. McClain, anything else?

MR. MCCLAIN: No.

THE COURT: Okay. You may step down, Mr. Stults. Thank you.

And everybody can take a stretch break.

And do you have your next witness ready to go?

MR. MCCLAIN: I do. We would call Dr. Pue to the stand.

THE COURT: If you'd just come into the center of the courtroom, I'll swear you in. Good morning. I guess it's still good morning. Would you raise your right hand, please.

CHARLES PUE, PLAINTIFFS' WITNESS, SWORN

THE COURT: Thank you very much. Please be seated.

MR. MCCLAIN: Your Honor, could I approach on a matter of personal privilege for a second for my client?

THE COURT: Do we need to take a break?

MR. MCCLAIN: Yes.

THE COURT: And how long will that break be?

MR. MCCLAIN: Well, I don't need to take one. He just needs permission to leave the courtroom.

THE COURT: Oh.

MR. MCCLAIN: And he's asking for that permission.

THE COURT: Yeah, that's fine.

MR. MCCLAIN: I was going to do it at sidebar.

THE COURT: Everybody please be seated.

Yes, Mr. Stults, you're free to leave.

And it's not uncommon for parties and corporate representatives and even lawyers -- and you've seen they come and go sometimes. So that's fine.

MR. GUNN: Your Honor, while we're at it, would you explain Mr. Bates' absence?

THE COURT: Oh, yes.

MR. MCCLAIN: I have no objection.

THE COURT: Yeah. The corporate representative for IFF is absent now, and that -- I don't remember the reason why or that we need to get into it.

MR. GUNN: Food poisoning.

THE COURT: Pardon me?

MR. GUNN: Food poisoning.

THE COURT: Oh, that's right. Yes. Thank you.

MR. MCCLAIN: I don't believe that that's possible in Sioux City, Your Honor. I just don't believe it.

THE COURT: Well, probably jurors and I can attest that, you know, it's possible. And you really have to watch out for doughnuts I hear too so . . .

We met very early this morning, so I brought doughnuts and coffee for the lawyers because we met much earlier than we started this morning, so I was just teasing them. But yeah, their corporate representative, Mr. Bates, has food poisoning, so that's why he's not here. And you should not draw any adverse inference from the fact that a party is -- and a corporate representative are in the courtroom or not in the courtroom.

Okay. Would you tell us your name, please, and spell your last name.

THE WITNESS: Charles Pue, P-u-e.

THE COURT: Thank you.

DIRECT EXAMINATION

BY MR. MCCLAIN:
Q. Are you a medical doctor?
A. Yes, I am.
Q. Tell us about your training to become a doctor, Dr. Pue.
A. Well, I did four years of undergraduate training with a B.S. in life sciences at Philadelphia University. I then went to Temple University Medical School for four years from 1984 to 1988, then went to Ohio State and did my internship, residency in internal medicine and then my fellowship in pulmonary and critical care medicine at Ohio State also from 1991 to 1994.
Q. You really were kind of a -- I -- you went to medical school quite young.
A. Yes, I did.
Q. You were in an accelerated program and finished -- how old were you when you finished medical school?
A. Well, I was kind of Doogie Howser. I would walk into patients' rooms, and the first thing they would say to me instead of hello, they'd say, "How old are you?" So I was actually 20 when I started medical school.
Q. And so how long have you been in medical practice, Dr. Pue?
A. I completed my training in 1994, so 20 years.
Q. Tell us -- tell us then what other medical training you got beyond medical school at the Ohio State University. I know you call it the Ohio State University.
A. Yes. Well, after I finished my formal training at Ohio

State and my fellowship in pulmonary and critical care medicine, I then went to the University of North Carolina in Chapel Hill, and I was a junior faculty member there for three years. I did research in cystic fibrosis, lung transplant, and general pulmonary medicine, but it was -- it wasn't an official training program. It was more of a junior faculty position, but it was more of a learning experience for me.

Q. And in that experience, did you have direct training and involvement with lung transplantation?

A. Yes, I did.

Q. In fact, witnessing several lung transplants.

A. Well, I participated in a large part of the practice with the lung transplant patients. It started with patients that were preoperative being evaluated for transplant. I participated in evaluating their current condition, whether they were eligible for transplant, whether they had contraindications that they weren't eligible for transplant. I managed them to keep them alive until they could get transplanted. Sometimes they didn't survive long enough to get transplanted. I managed patients in the ICU who were waiting for transplant.

And then in the perioperative period around the time of transplant, I assisted in getting the patients off the ventilator after surgery. And then in the postoperative, after the transplant, I did the surveillance bronchoscopies where we put a tube down the breathing -- down the airway and got pieces

of lung for biopsy to look for rejection and managed their breathing symptoms after transplant.

Q. How long did you stay in North Carolina?

A. 1994 to 1997.

Q. And then what did you do?

A. I moved back to Ohio.

Q. And did you resume an academic career, or did you go into private practice or some other --

A. Kind of did a little of both. When I first went back to Ohio, we were -- at that point the Cystic Fibrosis Foundation was trying to transition CF patients who were over 18 into the adult practices because prior to that CF patients had all been dying in early childhood or in their teenage years. So most pulmonary adult physicians didn't know how to take care of them. So my charge when I went back to Ohio at that point was to establish an adult program for CF patients.

Initially we had the backing of that with Ohio State, and over the couple of years that kind of waned, and the patients are still to this day cared for at Columbus Children's Hospital. It's kind of funny having a 40-, 50-year-old patient with CF on the floor with 3-year-olds. We usually have to have them cover up their tattoos, their naked lady tattoos, and things like that.

But -- so that was my transition at that point with the lack of support for the CF program. That's where I really

transitioned to, you know, pure patient care and teaching, and ultimately that's all I ever wanted to do. I went to medical school to take care of patients. That's what I love to do. And research and those kind of things were the work that I had to do to do the things I loved, so I got away from the research and just take care of patients now.

Q. Did you -- do you still have a teaching role?

A. Yes, I do.

Q. What is your teaching role?

A. Yeah, I'm assistant professor of medicine in pulmonary and critical care medicine for Ohio University, the other Ohio University, not Ohio State. And we have medical students who rotate on my service every month, usually two medical students. They're usually fourth-year medical students who are in the last year of their schooling.

And then we also have residency program in medicine and surgery and family practice, but primarily the residents I work with are the medicine residents.

We also have a pulmonary and critical care fellowship. That's one fellow per year, but that's a three-year program, so there's a total of three people in our training program, and they're training to do exactly what I do basically.

Q. Do you have any roles at the hospitals in and around Columbus?

A. Yes, I do.

Q. What roles do you have?
A. Well, over the last couple of years I've been asked to be involved more administratively in the hospital system. I work for Ohio Health, and Ohio Health owns eight hospitals. And they're trying to bring all of the hospitals together and raise the standards at some of the smaller outer lying hospitals that are part of the network. I sit on a committee called the system-wide critical care committee, and our job is to try to bring the standards for all the hospitals up to the same level through developing policies, orders, procedures, looking at, you know, problems that are at different hospitals.

And then within my own hospital I'm chair of the clinical quality and the peer review committee. And those committees are charged with monitoring the physicians in our own hospital. So I review every death. I review every unexpected outcome. I review every complaint, whether it be from a staff member, whether it be from a family member, whether it be from another physician. And I take my findings to the committee, and a finding is made either in favor or against or whatever. And we make recommendations to the physicians for improvement of their care, remediation of their training, sometimes behavioral issues. You know, doctors sometimes have bad behavior. And we make recommendations for behavioral improvement for docs as well. And if -- you know, sometimes we have to and over the last couple years we've had to remove a few docs from the

medical staff because they didn't meet the standards we had set.

I also sit on the medical executive committee which is the highest committee in the hospital of physicians. And it's made up of the physicians that work at our hospital, the president of the hospital, and the vice president of medical affairs. And we basically -- everything that gets approved or changed within the hospital has to come through us. Anything that's related to patient care has to come through us, and then our recommendations go to the board which the board of a hospital is not physicians. It's lay people. And they're -- and because we're a nonprofit organization, they have to make the final decision. So we have a lot of responsibility when we answer to them, and they look to us for our guidance as the physicians as we make recommendations to them.

Q. Doctor, in this regard, do you also, in addition to your teaching and your administrative duties at the hospital, see patients on a daily basis?

A. Yes, I have a full-time practice as well.

Q. You know, give the jury some sense. How many patients do you see in your clinic on a weekly basis?

A. The numbers are kind of up and down all the time. I can see -- I can see a hundred people -- when I say a hundred, that includes -- when you're talking about hospital patients, they may be there for several days in the intensive care unit, so I may see them for five days. That counts as 5 visits, but I have

a hundred or more patient visits a week, maybe 200 patient visits a week when it's busy wintertime and lot of sick people around.

Q. And so there's been some questions about you're not a pulmonologist or you're not this or that. You are a pulmonologist.

A. Yes, I'm a working, treating pulmonary critical care physician. That's what I do full time.

Q. And do you -- are you board certified in pulmonology?

A. Yes, I am, since 1994.

Q. And do you currently evaluate patients for lung transplantation?

A. Yes, I do on a regular basis.

Q. And are you familiar with the process for someone to be admitted into a lung transplantation process?

A. Absolutely, yes.

Q. Let me -- we're going to talk about that process. I think it might be after lunch by the time we talk about the exact process. But let me ask you this. Long before you ever met me, were you seeing patients who had been exposed to diacetyl in the work setting?

A. Yes, I did, and that's how I met you.

Q. Because you were the treating physician of people that were being diagnosed by you with diacetyl-related lung disease.

A. Absolutely, yes.

Q. And just tell the jury the nature of what brought you in contact with people that you were diagnosing with diacetyl-related lung disease.

A. Well, Ohio, like Iowa and Nebraska, is primarily a farm state. I work in the city, but my hospital is outside the outer belt of the city, so if you just go 5 miles west of where I work, you're into the farmlands. And we're surrounded by corn all over the state of Ohio.

And back in the mid 2000s probably, I started seeing a series of people coming in from a facility called ConAgra in Marion, Ohio, which is on the north side of the city. But they were being sent to me by a primary care doctor up there who was initially diagnosing these people with asthma for several years. But they were continuing to get worse. They weren't responding to their normal asthma treatments that he expected they would respond to. And he referred them to me because there was no pulmonary doctor up in their town, their small town.

And over, you know, the next year as I started working these patients up and I kept seeing one after another with the same symptoms and the same findings on their CAT scans and the same findings on their PFTs and I started doing more research, it became apparent these people were all popcorn workers. They worked in a facility that made microwave popcorn.

And in early two thou -- I think it was 2002, that's when the paper was in the New England Journal about popcorn

workers' lung or what lung doctors -- we just shorten it and call it popcorn lung.

And when I saw that article and started put two and two together, then it became apparent that these patients, you know, had popcorn-related or butter flavoring-related lung injury. And over the years that -- you know, our knowledge has evolved about that and I've seen patients from other parts of the state and that's where this has all come from.

Q. And that's how I came to know you is that some of the people that hired me had already seen you, and we began to ask you to come to court to testify about what you'd found among these people.

A. Yes, that's correct.

Q. And since that time, Dr. Pue, have you at my request reviewed other people who have asked do I have this disease kind of as a quality assurance check to be sure that these people -- or to diagnose them in terms of what they have?

A. Yes. I've seen hundreds of people over the last, what, eight years I think or seven years, something like that, since I first met you. Some of them already carried the diagnosis of bronchiolitis obliterans related to diacetyl exposure. Some had called your office, you know, because they had heard about it or they knew somebody who worked at the same place they did or they heard about it on the news and then they were coming to me and they really hadn't had much of a work-up before I saw them. So

I've seen both types.
Q. And, Dr. Pue, generally so that the jury understands this process, when I contact you, I ask the question will you please see whether or not this person does or does not have this disease?
MR. HILL: Object. Leading.
THE COURT: Sustained.
BY MR. MCCLAIN:
Q. Tell the jury what the nature of the question is that you're asked to address when these people, you know, contact my office and I call you about them.
A. Basically what happens is someone from Mr. McClain's office contacts my assistant and says we have a patient or a few patients we want to have evaluated for what's called an independent medical evaluation. So they're not coming for me to be their treating doctor. They're coming for me to evaluate them, determine my opinion and then write a report. So it's a brief interaction meaning it's a day's of inter -- one-day interaction, and I don't follow them after that evaluation.
I basically have no knowledge of them prior to me seeing them other than just their name and date of birth, and I prefer it that way. I receive a CD with all their old records usually two days before the patient is seen. I don't open that file. I don't open the Fed Ex envelope until after I've seen the patient because I don't want to be biased by somebody else's

opinion before I see them.

So when the patients come, they get pulmonary function tests done in our hospital lab. They get a high-resolution chest CAT scan because that's the best way to evaluate for lung disease. They get blood work to exclude other causes of common lung disease.

And then after they do all that, then I evaluate the patient in the middle part of the day to the end of the day and I spend -- and I block those days so I have as much time to see them as I need. Sometimes takes an hour. Sometimes it takes two hours. And one person took over three hours because their story was so complex. But I don't limit it, and I only see a -- when I see those patients, I only see a few at a time, maybe three or four, sometimes five in a day, but that's my whole day seeing those people for that day.

Q. And, Dr. Pue, have you found that some of them don't have diacetyl-related disease, lots of them?

A. Most definitely, yeah. More than -- I probably di -- or I'd probably say I can't find a diagnosis of diacetyl or I don't make a diagnosis of diacetyl-induced lung disease in more than half the patients that are sent to me from your office. It probably ranges at about a third, you know, a quarter to a third. But the patients that you're sending me, you know, they have -- they've already been diagnosed or they have symptoms, so, you know, there's something going on with them. It's just a

question of what caused it.
Q. Now -- so -- but, doctor, you talked about this process of how you came to it, you know, in the role of a treating physician for these workers that come out of microwave popcorn plants. And is there an established literature today which establishes this disease unequivocally as being caused by exposure to diacetyl?
A. Yes, there is.
Q. Mr. Gunn has stipulated to this association, this cause and effect, not association, a cause and effect, between diacetyl and bronchiolitis obliterans. So I don't want to go through too many of these.
But just as an example of one of the sources that I think you've seen, are you familiar with Lung Diseases in Flavoring and Food Production: Learning From Butter Flavoring, a book chapter by Dr. Sahakian and Dr. Kreiss that was published in 2009?
A. I am, yes.
MR. MCCLAIN: That's Exhibit 219, Your Honor.
Q. And I'd just like to ask if you are relying upon this in making the statement about diacetyl-related lung disease. Diacetyl, a major component of butter flavoring, causes bronchiolitis obliterans based on cases of BO among chemical manufacturing workers who made diacetyl and animal studies that show respiratory effects from diacetyl alone.

A. Yes, that's true.
Q. And do you hold that opinion to a reasonable degree of medical certainty, that is, that diacetyl from butter flavoring or diacetyl alone will cause bronchiolitis obliterans if people are exposed to it?
A. Absolutely.
Q. Let me -- let me ask you about Mr. Stults. Did you examine Mr. Stults?
A. Yes, I did.
Q. Tell the jury about your examination of him and what you found.
A. Well, I saw him -- it was 2011. I don't know the exact date, but it was about three years ago. And I saw him in the office. And I did a history and physical examination. And I did the tests that I mentioned earlier. At that time he was having significant shortness of breath which had been gradually progressive over several years.

In questioning him and trying to go back through the history of how long his symptoms had been present, he was kind of vague as to the onset. And often these patients are somewhat vague because it's a slow progression. It's kind of insidious onset. It's not like it's an abrupt one day they're fine, next day they're sick. And he had been adjusting his lifestyle for several years I think unbeknownst to him because of gradually progressive symptoms. He had had -- cough had been on and off

for several years, and he was having chest tightness which had been evaluated for heart problems which he had been found to have no heart problems at all.

Q. Stop for a minute. Mr. Gunn has asked all kinds of questions about heart ablation. Is there any relationship between his breathing problem and those heart problems that he suffered up until last year?

A. Absolutely not.

Q. There's no re -- you're a pulmonologist. There's no relationship.

A. There is not.

Q. Describe for the jury why not. Why is it that the heart atrial fibrillation -- did I say that right?

A. No.

Q. No. Say it for me.

A. Atrial fibrillation.

Q. Huh?

A. Atrial fibrillation.

Q. Atrial fibrillation. I'm not going to get it right.

A. You can call it Afib.

Q. I'll let you -- I'll let you say it. But there's -- tell the jury why there's no relationship between that condition and his breathing difficulties.

A. Well, first of all, Afib -- you can call it Afib for short.

Q. Afib. I'll remember that.

A. -- is the top part of the heart goes into an irregular rhythm. It can be associated with shortness of breath, but in the way that it occurs, it's while you're in atrial fibrillation. You might feel a little more fatigued. Maybe you feel a little bit short of breath while you're having the Afib. But once you're not in Afib, those symptoms should completely go away.

And his Afib had been intermittent for many years and had been treated. He had been cardioverted in the past which means to get the heart back into a normal rhythm. When he was cardioverted, he described a change in how he felt but had no impact on his overall feeling of shortness of breath. And that's exactly what I would expect. There's no reason that that intermittent Afib would cause him to be short of breath all the time and to feel bad like he does.

Q. All right. And have any of his other treating physicians ascribed his shortness of breath to the Afib?

A. Well, I think early on in the mid 2000s the assumption was, well, perhaps his heart -- he's having heart problems and that's why he's having shortness of breath. But once the cardiac work-up was completed and ultimately had a cardiac catheterization a few years later, he was not found to have any structural heart disease. So the idea that it was cardiac in nature was, you know, found to be -- that it wasn't from cardiac.

Q. So they had ruled that out.
A. Yes, exactly.
Q. Now, let me ask you, in this regard, you mentioned the fact that his disease was progressive. Does the fact that he was diagnosed in 2009 mean that that's when the disease started?
A. No, absolutely not.
Q. What is his FEV1? What is his forced expiratory volume currently?
A. I believe he's around 40 percent.
Q. To get to 40 percent, doctor, in general, how long would that take to be able to get some sense of his disease course?
A. It takes years, and I don't mean two years, three years. It takes many years. Average loss of lung function for a normal person is about .02 liters per year. He lost two liters, so that's a hundred times that from what his baseline was or at least a liter and a half. So he lost, you know, what, 75 times that over whatever number of years. It didn't just happen in a year. It didn't happen in two years. This had to have been going on for many years.
Q. And so would that take us back some time before -- well, you tell me. How many years back could the symptoms have started before it would be noticeable to him?
A. Well, you can lose a lot of lung function before you really realize it. And I always use this as an example. I had a friend who played college basketball, and he got testicular

cancer, and he had to have one of his lungs removed. After he had the lung removed, he still was able to go back and play college basketball because he still had -- they'd taken his left lung out. So he had 60 percent lung function. He could play college basketball, but he could only go about six minutes before he had to come out of the game and take a break.

So you can lose a lot of lung function and not notice it. So here was a guy playing, you know, Division II college basketball could play with one lung.

So most patients will adapt their lives. Maybe they'll, you know, instead of walking the whole distance, maybe they'll take the car one day. Instead of going up three flights of stairs, they'll take the elevator. They make adaptations, and they write it off. Oh, I'm just gaining weight. I'm getting a little older, so they really -- it's hard for them to pinpoint when the symptoms start. But it's usually insidious for many years before most patients notice symptoms.

Q. And is it usually at some point in terms of lung function before they really begin to notice, I mean, that it really begins to limit normal everyday activity?

A. In my experience, I don't know that it's ever been in the literature about an exact number. But I usually say roughly about 50 percent. When somebody's down to about half their normal lung function, that's when they really start to notice and maybe especially when they're at 40 percent, then they have

marked symptom increase over 50 percent. So that drop from 50 to 40's a big drop.

Q. Now, I mean, this is something that we've addressed previously. I mean, how much do you need just to live?

A. Well, it depends on your size and how active you are and all those kind of things. There's other confounding factors. But when you start getting down under 30, then you're really -- pardon me for being rough in front of the patient. But when you're at 30 percent, you really could die at any time. If you were to get pneumonia at 30 percent, you might not survive the pneumonia. If you get down to 20 percent, that's not compatible with life.

Q. And so with Mr. Stults being at 40 percent, he's only in your experience got about a 10 percent reserve currently.

MR. HILL: Object. Leading.

THE COURT: Sustained.

BY MR. MCCLAIN:

Q. Tell me, does -- I mean, at 40 percent how much reserve does he have?

A. Well, you know, I don't like -- I don't know if I want to use the term reserve because he really doesn't have any reserve. He's using everything he has to just sit and talk and do those activities. You know, you need 50 percent to be able to walk briskly. At 40 percent walking briskly will make you feel short of breath. At 30 percent you're sitting in a chair, and you

can't even, you know, take care of yourself many times. You can't shower yourself. You can't bathe yourself. You can't cook for yourself because you're too short of breath. So I don't like the term reserve there, but hopefully that answers your question.

Q. That gives us some sense.

Now, did you see Mr. Stults just one time, or did you follow up with him?

A. I had a deposition in 2013 at the request of the defense. And I hadn't talked to him in two years, so I asked if it would be okay for me to make a phone call to him so I could get an update on his condition prior to the deposition.

Q. All right. And so you did that.

A. I did do that, yes.

Q. In the course of your two exams and discussions, what did you come to learn about his popcorn consumption?

A. Well, in the initial exam, I don't believe that his wife was with him when I saw him the first time, and he told me that he had -- he believed he'd stopped using popcorn regularly or eating it regularly in 2004. If I remember correctly, I think it was 1991 to 2004 is what he told me at that time. And the reason he used those dates was he had described that it was a ritual for he and his wife to make popcorn. He would pop two bags while she was putting the kids to bed every night, and then they would sit and watch TV, watch a movie and eat the popcorn

together. And he was very -- you know, he remembered that very specifically.

But he said 2004, and then when I talked to him in 2013, he said, you know, since the last time I talked to you, I've been thinking more about it; my wife and I have talked more about it, and she said -- and she reminded him that he had been eating popcorn before 1991 although not as regularly -- microwave popcorn I'm referring to -- and that he didn't stop completely in 2004 and it probably continued to at least 2007, and I believe they moved maybe in 2007 or 2009. And when they went to their new house, that's when they broke their ritual of eating the popcorn every night.

Q. But regardless of the time, you know, whether it was -- whether they stopped in 2004 which would be when IFF stopped selling to ConAgra or it tapered from that point on, did he have enough exposure in your view based upon the literature that his lung disease might be caused by his exposure to microwave popcorn?

A. Absolutely, yes.

Q. Okay. So it didn't really matter in terms of your diagnosis whether it was, you know, 17 or 20 years or, you know, some time in between. There was enough exposure.

A. Oh, there was -- there's no doubt in my mind that he had enough exposure. Whether it ended in 2004 or 2007, it didn't matter. His exposure was enough, and his symptoms began in the

early 2000s.
Q. Now, when you say that, what do you mean?
A. Well, after I talked to him and I reviewed his old records, there's documentation in his old records -- I think it was May of 2005. You can correct me if I'm wrong on that. But he presented for chest tightness, and at that time the discharge diagnosis was noncardiac cause of chest pain. So he presented with chest tightness, but they didn't -- they did a heart work-up on him, and it was negative, so they sent him home. No pulmonary work-up was done at that time.

He also had chest X-ray done I think in either 2005 or 2006 and the diagnosis that was -- the clinical history which the doctor would write down why he was ordering the chest X-ray was chronic cough. I think it was either 2005 or 2006. So he clearly had a chronic cough which chronic cough means you've had cough for at least three months and probably longer. And he had symptoms of chest tightness, and that dates back to around the time when he had said he had been eating the popcorn regularly.
Q. So is -- that disease course and the symptoms that you disclosed from your perspective as a pulmonologist, what do they tell you?
A. They tell me that -- well, at that point he had all the signs and symptoms clinically of bronchiolitis obliterans. He had -- the symptoms that he described to me were consistent. He had the findings on the CAT scan. He had the findings on the

pulmonary function test, and he'd even had a biopsy done at the Mayo Clinic which confirmed the diagnosis. And combine that with the extended history of many years of eating microwave popcorn and making it himself, opening the bag and how he described he loved the smell of the butter flavor and he liked to inhale that smell, he had a significant exposure that would, you know, completely explain his findings.

Q. And, Dr. Pue, in your review of the literature, are there other examples of breathing microwave popcorn from popping that have been established in the science as causing bronchiolitis obliterans?

A. Yes, there are.

Q. Can you describe those for us?

A. In the industry I think it was first described in the microwave -- in the quality control people, so in the popcorn factories, there are people who go to the line and they randomly pull -- and I've actually had patients who this was their job. They pulled bags off the line, and they popped bags each hour, and they measure how many kernels didn't pop and all those kind of things.

Until the last few years, they just used regular microwaves in an open room, and they popped popcorn all day long. And after a couple of years, they got sick just like the workers did who were making the butter flavoring in the big vats.

Q. And, Dr. Pue, did you even treat some people who were some quality assurance from ConAgra?
A. I did actually, yes.
Q. And did some of them report very little -- very low quantities of bags that they popped every day?
A. Yeah. Depending on the facility where people worked, you know, they may have had multiple hats in their jobs. You know, maybe they worked in the office part of the day; they went to the line part of the day. So some people had very minimal exposure where they were just in QA once a week or something like that and they were popping popcorn and then they may not be in there the rest of the week or they were there part of a day each day, something like that.
Q. And so based upon the history that you were able to ascertain and the way that Mr. Stults popped microwave popcorn and savored the aromas was at least as a first cut your view that that was sufficient exposure or insufficient exposure for him to have the disease that had been described in the literature?
A. Oh, in my mind it was definitely enough exposure to have the disease that was described in the literature and to have the disease that he was found to have on his -- all of his evaluations.
Q. Now, you mentioned previously pulmonary function tests. Why are tho -- why is it important to look at pulmonary function

tests?
A. Well, pulmonary function tests are a measure of how much airflow you have, how big your lungs are, and how well air gets into your bloodstream.
Q. And did you perform your own PFTs on Mr. Stults as well as look at his records from other institutions?
A. I ordered them. They were done at the hospital lab, yes.
Q. All right. And what did you find?
A. In 2011 when I saw him, his lung function -- do you have the exact number? I believe it was 41. I don't want to misquote the number.
Q. I'm going to hand you 1435 which is in evidence, or actually we can pull this up. I believe this is what you're looking for. Is this --
A. Yes.
Q. Is this your report?
A. No, that's -- what's the date on this?
Q. This is from Grand Rapids. I'm sorry.
A. Yeah, that's not mine.
Q. Okay.
A. I want to make sure I give the right number. I don't want to just go off the top of my head.
Q. Let me -- let me find that at the break, and we'll come back to that. But tell us what you recall about not necessarily the level you found but what -- actually in your report -- would

it be in your report?
A. It's in my report in the table in the back. Yes, I summarized.
Q. Okay. Let's go to that then. Let's go to 1222. Is this more like it?
A. Yeah, that's the numbers I was looking for. Thank you.
Q. Okay. I apologize. Go ahead.
A. So there's several different measurements that are taken when we do a pulmonary function test. And I put down the key measures that are important on this table. Just describe what the different numbers mean.

So the FEV1, the first column -- or the second column of numbers, that's the amount of air you blow in one second. That's a pretty good marker of how well you can exert yourself, what you can do because when you are increasing your activity, you have to increase your rate of breathing. If you can't get air out quickly, then you can't recruit more lung and you can't do the exercise that you want to do.

The second column, the force vital capacity or FVC, that's the total amount of air that you can blow out over a full exhalation blowing as hard as you can.

The third column is FEF 25-75. This is a value that early on in my career we just discounted it because we weren't sure what to do with that number, and in my training we -- in the -- well, the late '80s, early '90s we just kind of ignored

it.

Over the late 1990s into the early 2000s, it's become -- it's been shown that this is directly related to small airway injury. So this is a measurement of the flow in the tiny airways or the little bronchioles that are just microscopic size.

And then the next column, FEV1/FVC, that's what percentage of air you can get out in the first second compared to the total amount of air that you exhale over the whole time.

Next column is total lung capacity which is just how big your lungs are so at the end of a full deep inspiration, how much air's inside your chest.

Residual volume is how much air's left in your chest after you exhale as far as you can so you get all the air out. There's still a little bit of air left in your chest.

And then the final column is the ability of air to get into the bloodstream, and we use -- carbon monoxide actually is what we have people inhale. It sounds funny, but we have them inhale carbon monoxide, and we measure how much goes into the bloodstream, and that's how we measure how well the blood can take up air from the little air sacs, the alveoli.

Q. And based upon your findings on pulmonary function test, was this consistent or inconsistent with the pattern that you had found among the microwave popcorn workers?

A. This is absolutely consistent.

Q. And tell the jury why it is that this is absolutely consistent.

A. Well, the values, the bottom two rows are the values I obtained on my evaluation on 7-21, 2011. The key points are the FEF 25-75. The absolute value was 0.34 which is 10 percent of normal. That's how much airflow was in his small airways, the smallest bronchioles, and that's the area that is damaged first in patients who inhale the butter flavoring and get the lung injury, the bronchiolitis obliterans.

And that's been described consistently through the literature in these patients, and it's also been present in my experience in seeing, you know, a couple hundred people with this.

The FEV1, the second column, the 1.53, that's 39 percent of normal. So he's under the 40 percent normal at that point.

He doesn't change at all when he's giving -- the bottom row, the post-BD, that's where we gave him an inhaler medicine, and then we wait 15 minutes, and then we repeat the test again. His values didn't change significantly. They need --

Q. How much do they need to change to know that that has an effect?

A. We'd like to see a 20 percent change to call it significant.

Q. And he only had a 1 percent change.
A. It was even less than that because you compare the 1.53 to 1.56. It's pretty small. It's insignificant.
Q. Is that what's called fixed lung disease?
A. It's called fixed obstruction.
Q. All right.
A. Meaning that it's not reversible. The alternative would be reversible obstruction which is what you have if you have asthma where you take an inhaler and your breathing gets better; these numbers would go up after a breathing treatment. And in him they didn't change at all.
Q. And so go ahead. What other findings are consistent with the diacetyl-based lung disease you've seen in popcorn workers and others?
A. A couple other things are the lung volumes. And he has -- at times on the first couple of tests he had elevated total lung capacity, the TLC, and an elevated residual volume. That's somewhat of a variable finding, and it depends on how the test is done. And I'm not privy to how those tests were done, whether they're done in a glassed box or whether they're done just inhaling gas. But we do ours in a glass box called a body box. And it did not show any enlargement of the lungs on our test which would be consistent with these findings.
Q. And what about air trapping? Does he have evidence of air trapping?

A. Well, there's a couple different ways you can measure air trapping. And air trapping is air that's stuck in the lungs at the end of expiration, and that's what the RV measures. We did not get it on our test that day, but there's other ways to measure air trapping including a CAT scan.
Q. And did you see that on the CAT scan?
A. Yes, he absolutely had air trapping on his chest CAT scan that day.
Q. And in regard to the CAT scan, the high resolution, is that HRCT? Is that what we're --
A. Yes, HRCT chest is a newer form of CAT scan of the chest where the slices of the lungs that the computer generates are really fine, so we're usually doing two-millimeter segments. These are really nice, sharp pictures of the lung tissue. You can see things that we couldn't see, you know, 10 years ago, 15 years ago.
Q. And was his HRCT consistent with what you'd seen from other patients?
A. Yes. He actually had almost every -- I think he had every finding that you see in patients with bronchiolitis obliterans. Often the patients will have two findings, one finding that is diagnostic of bronchiolitis obliterans. But he had multiple. He had air trapping, so he had some areas of lung where the air was stuck at the end of expiration and other areas where it emptied, so they were emptying at different rates which is

classic for bronchiolitis obliterans.

He also had what's called mosaic patterns, so there was areas where it looked like there was more blood flow and less blood flow in other areas which is also diagnostic in bronchiolitis obliterans.

He had areas of bronchiectasis which is where the bronchial tubes are actually damaged, and they're enlarged way out into the small bronchioles because as they get smaller and smaller and get out you can't -- out into the periphery or the outside of the lung, you can't see them anymore on CAT scan because they get too small. But on his they got larger as they got out to the edges, and that's called bronchiectasis or enlargement of the small bronchioles.

And he also had bronchial wall thickening. So normally when you look at the wall of the bronchial tube, it's just paper thin. And on his bronchioles they actually looked like they had a little cuff around them. They were thickened. And that shows chronic inflammation around the bronchial wall.

Q. So were all his tests that you reviewed consistent with bronchiolitis obliterans caused by diacetyl?

A. Absolutely, yes.

MR. MCCLAIN: And, Your Honor, this would be a good time if this is when you'd like to take our lunch break?

THE COURT: Sure. That would be excellent. Thank you. Members of the jury, we'll take an hour-and-15-minute noon

recess. Please remember to keep an open mind till you've heard all of the evidence. Don't discuss this case among yourselves or let anybody talk to you about it, and we'll see you back here at 1:15. Thank you.

(The jury exited the courtroom.)

THE COURT: Anything we need to take up?

MR. MCCLAIN: No.

THE COURT: Okay. We'll be in recess. I'll ask Matt to bring out some of the remaining doughnuts if you need a sugar rush. Thanks.

(Lunch recess at 12 p.m.)

THE COURT: Please be seated. I'm just a little early.

MR. MCCLAIN: Judge, is this a good time, Judge, to make a ruling on these charts? Mr. Gunn asked for a break before you ruled on them, but maybe it's time.

THE COURT: I mean, I'm ready to rule. Want your book man to talk to me for a while?

MR. GUNN: We're not ready, but we'll be ready tomorrow morning, and then he'll have the weekend to figure out what to do.

THE COURT: I'm pretty confident they're admissible. I looked at some case law last night myself, so pretty confident, and it would be harmless beyond any possible doubt if it was error, and I'm confident it's not error, so I'm pretty

sure they're coming in. But I'll defer it for another day.

On the -- okay. We're not criminal, so it's not a Rule 29 motion. On the Rule 50 motion, at the close of the plaintiffs' case, because -- I was going to say because I've never granted one, but I might have granted it on one count once, but anyway, I'm not going to grant it in this case. So -- but I want to make sure you have an opportunity to make your record on it.

What we'll do is just defer it after the plaintiff rests. You'll begin calling your witnesses. Then once we send the jury home tonight, you can make your Rule 50 motion as a judgment of matter of law, and it will be deemed having been made at the close of the plaintiffs' case. I've always done it that way for 20 years.

MR. GUNN: That's fine.

THE COURT: Okay?

MR. GUNN: I've had it granted one time, and then I got it reversed on appeal.

THE COURT: Really. Yeah. Well, you know, generally the jury kind of gets the judge off the hook. But in a case like this where there's, you know, a lot of -- it's not going to take a whole lot of time to put on the defendants' case. Even if I was inclined to grant it, I'd go ahead and complete the trial and then grant it. Then you don't have to retry the case if you're wrong. It's just a good trial management technique.

I did have something I wanted to bring up. I think one of our U.S. marshals indicated that -- to one of my law clerks and my judicial assistant who then told me that someone they thought from the plaintiffs' team was using their iPhone to take pictures of exhibits, and that occurred last night. Okay. And why don't you come to the podium, and we'll make a little brief record here. Do you know anything about it?

MR. MCCLAIN: I don't.

MS. MCCLARTY: I was just taking pictures of our own boards, not anyone else's.

THE COURT: Yeah. That's really not a permissible purpose of making the exception to allow you to have the iPhones in the courtroom. But I don't think there's any problem with it. Why would you need to take a --

MS. MCCLARTY: I just didn't want to carry all the boards back.

THE COURT: Oh, I see. Okay.

MS. MCCLARTY: To the hotel.

THE COURT: That's fine.

MS. MCCLARTY: So I was trying to --

MR. MCCLAIN: Of these charts we made up in court because she didn't have record of those. I didn't know about it.

THE COURT: No, that's fine. I just -- you know, it was a little bit unusual. I just wanted to find out what

happened so -- hey, let's bring the jury in. No problem. No harm. No foul.

(The jury entered the courtroom.)

THE COURT: Thank you. Please be seated.

Dr. Pue, you can return to the stand.

Let me ask the jurors a question. You normally don't vote till the end of the case, but, you know, it's a little bit light out today. So would you prefer these three windows open or closed? Let's do open first. Raise your hand if you prefer them open. If you prefer them closed, raise your hand. Okay.

Mr. McClain, you can continue your direct examination.

MR. MCCLAIN: Thank you. Thank you, Your Honor.

Good afternoon, ladies and gentlemen.

BY MR. MCCLAIN:

Q. Now, when we broke, we were going over your findings, your testing findings. You were telling us about the HRCT findings. And I think you were telling us that they were consistent also with diacetyl-related lung disease. After you did those tests, were you able to make a diagnosis, Dr. Pue?

A. Yes, I was.

Q. All right. And would you tell the jury what your diagnosis in this case is.

A. My diagnosis is flavoring-related bronchiolitis obliterans syndrome.

Q. All right. And is that the same disease that the workers

from Jasper and Marion and the other places have had?
A. Yes, it is.
Q. And is it consistent with your own experience in diagnosing people who've had exposure to diacetyl in the work setting?
A. Yes, it is.
Q. And do you hold those opinions to a reasonable degree of medical certainty?
A. Yes, I do.
Q. Have you seen other consumers who've had bronchiolitis obliterans?
A. Yes, I have.
Q. And you have diagnosed them?
A. Yes, I have.
Q. And have some of them been at the request of my office?
A. I'm trying to remember if all of them were at the request of your office or -- I think all of them were at the request of your office.
Q. But in your case where you have made such a diagnosis, have they been -- have some of them been diagnosed quite independently of any litigation process?
A. Yes. I've seen 4 people I believe, maybe a fifth, but I know for sure 4, and I believe 2 had already been diagnosed with bronchiolitis obliterans before I saw them, had confirmed diagnosis of bronchiolitis obliterans, and the other 2 had suspected diagnosis of bronchiolitis obliterans, but it wasn't

yet confirmed.
Q. Do other -- have other nationally known and respected pulmonologists or occupational physicians diagnosed consumers with bronchiolitis obliterans caused by microwave popcorn?
A. Yes, they have.
Q. Can you name some of them for us?
A. Well, I know for sure Dr. Rose at Denver Jewish Hospital because I had seen one that -- one patient that she had diagnosed with bronchiolitis obliterans, and then Dr. Neil Schachter at Cedars Sinai in New York has also diagnosed patients. I believe Dr. Harbor at UCLA has diagnosed patients with diacetyl-induced lung disease that was a consumer.
Q. And naturally Dr. Parmet and Dr. Egilman have too.
A. I know that Dr. Parmet has. I believe Dr. Egilman has, but I know that I've seen cases that Dr. Parmet has seen, yes.
Q. Now, in making your diagnosis, did you do what's called a differential diagnosis?
A. Yes. A differential diagnosis is working through potential diagnosis as you're solving the puzzle of what somebody's diagnosis is. So either informally in your mind or formally on paper you go through the potential diagnosis that it could be.
Q. And did you do that in this case?
A. Yes, I did.
Q. Tell us the diagnoses that you considered but ultimately found not to be applicable here.

A. Well, as you go through the history, you're taking a history that may indicate some other cause of a lung disease. So you start off with the usual things like cigarette smoking history, occupational exposure history, like what kind of chemicals do they work with, do they work with asbestos, they work in a coal mine in our part of the country, do they work in a silo because you can get silo lung injury if you work in a silo. So that's something.

Then you take a history about family members, whether they smoke, take a history of what kind of pets do they have, do they have birds, you know, because bird droppings can carry a fungus. You take, you know, a history about the longevity of their symptoms. That kind of gives you a history of did they have it in childhood or is it something started in adulthood.

Q. Alpha 1 antitrypsin, what is that?

A. That's an inherited form of emphysema. So when you take your family history, you're going to ask did they have any family history of somebody who had emphysema that didn't smoke or someone who got emphysema at a very young age, maybe 30 to 40 years old, because that could indicate an inherited form of emphysema.

Q. Negative skin test for TB?

A. Yeah. You always ask if somebody's had exposures to tuberculosis, whether they knew somebody was sick with tuberculosis, whether they've had a skin test for tuberculosis

and have reacted.
Q. Now, did you see any then of the potential causes were present or absent for Mr. Stults?
A. I excluded all the ones that I mentioned as well as many more. The list goes on and on and on.
Q. What about RA, rheumatoid arthritis?
A. That was not in my differential as a cause of his lung problems.
Q. Why is that?
A. He had no evidence of interstitial lung disease on any of my evaluation. And the type of lung disease that patients with RA get is interstitial lung disease. He had no physical exam findings to suggest rheumatoid arthritis. He had no joint abnormalities. He complained of no joint symptoms at all.
Q. And so he has the wrong type of bronchiolitis obliterans to be RA induced in your view?
A. He had no findings to suggest that his lung disease had anything to do with RA.
Q. Did you -- did you consider the tests that he'd had, the CC1-A test, the anti --
A. CCP?
Q. Anti-CCP?
A. Yeah. CCP antibody -- and after I saw him and then read all the records, I saw that he'd had a CCP done and he'd also had an RF done.

Q. What's RF?
A. RF is rheumatoid factor. It's the older antibody test for rheumatoid arthritis. It's somewhat nonspecific. It can be activated or the value can go up in people that just have inflammation in their body. It doesn't necessarily mean rheumatoid arthritis. But patients who have rheumatoid arthritis often have an elevated RF. But it's not diagnostic of RA, of rheumatoid arthritis.

The anti-CCP antibody, when it first came out, just like most things in medicine, when something first comes out, it's the best thing since sliced bread. You know, everybody says this is a perfect test, there's nothing wrong with it, it's a hundred percent. And the thought with the CCP antibody was if you have CCP antibody you have RA. That was what was put out there when it first came out.

Well, like always happens in medicine, as soon as we start using it in practice, we start finding all these little outliers. So CCP antibodies have now been found to be positive in patients with TB. They've been found positive in patients with COPD, with alpha 1 antitrypsin deficiency emphysema. So you don't have to have RA to have a positive CCP antibody.
Q. So in the case of anti-CCP antibodies, is it clear whether or not the lung disease is generating them or whether the antibody is generating the lung disease?
A. I don't know that anybody has any data to say that the

antibody is causing lung disease. It's just a marker of inflammation.

Q. All right. And in this case does Mr. Stults meet any of the other diagnostic criteria for rheumatoid arthritis?

A. None that I'm aware of.

Q. And did you see Dr. Eggebeen's testimony in this case?

A. I have seen his report previously.

Q. And he was asked this question. I want to ask if you rely upon it.

MR. MCCLAIN: Scott, is this loaded or is it --

Q. This is from the rheumatologist I think that's coming or they're going to read something from it maybe. And you weren't able to diagnose him to a reasonable degree of medical certainty with rheumatoid arthritis; true? That's true. He would not have met the classification criteria. Is that consistent with your view?

A. Absolutely, yes.

Q. He doesn't have rheumatoid arthritis.

A. He does not have rheumatoid arthritis.

Q. And what about this suggestion that rheumatoid arthritis can present in the lung first? That's been thrown about. Could that be true?

A. I have read case reports where rheumatoid arthritis preceded the rest of the rheumatoid disease, but it was in terms of months.

Q. All right. And so in Mr. Stults' disease course, is there any support in any literature that you know of of a decade-long disease course of testing, you know, once or twice for a anti-CCP antibody and RA never developing in the individual but he has RA lung?
A. I'm not familiar with any reports of that, and it's not consistent with my clinical experience either.
Q. Is it even consistent scientifically with what we know about RA?
A. Not in my opinion, no.
Q. I mean, it just doesn't hang around and hang around never manifesting as RA in your view.
MR. HILL: Object. Leading.
THE COURT: Sustained.
BY MR. MCCLAIN:
Q. I'll rephrase it. Is it consistent with the way that RA presents in your clinical history with seeing patients, hundreds of them, a week?
A. As a pulmonologist, we see a lot of patients with interstitial lung disease. It's a sad disease because it's a disease we don't have any treatment for. And so I get involved in a lot of cases of patients who present with RA. And sometimes their first symptoms start in the lung, and sometimes their first symptoms start in the joints, but I've never seen a case where they didn't come close together within months to

maybe to stretch it to a year. But I've never seen it longer than a year, and I've never read anywhere in the literature that it could be longer than that time period.

Q. Now, I want to talk a little bit about -- so is it fair to say after considering RA then you've reached a final diagnosis of Mr. Stults?

A. Yes, I have.

Q. And what is the diagnosis?

A. Flavoring-related bronchiolitis obliterans syndrome.

Q. And that's to a reasonable degree of medical certainty considering all the possibilities which have been suggested in this case?

A. That is correct.

MR. MCCLAIN: Your Honor, this might be a time. Mr. Stults has asked to be excused for this portion of Dr. Pue's testimony.

THE COURT: That's fine. Thank you.

BY MR. MCCLAIN:

Q. I want to turn our attention to the issue of lung transplant and the necessity of lung transplant, and you even have some demonstrative aids to show the jury what the nature of the lung transplant is so that they can have some understanding of what Mr. Stults is looking at.

A. That's correct.

Q. So give us some sense of where you think he is in terms of

his lung disease and what the course is likely to be and what's in front of him in terms of being evaluated and then ultimately transplanted.

A. Well, the American Thoracic Society published guidelines for when patients should be referred for evaluation in a transplant center for a lung transplant. And they're pretty standard guidelines I think that most people -- not most. Everybody follows.

There's something called a New York Heart Association Classification For Performance Status. And what it is, it's just a judge of what somebody can do physically.

And class 1 is if you're walking around with no symptoms whatsoever. You can do anything you want to do. Your health is normal. You can do anything.

Class 2 is where you have some limitation in your activity, but you can do most of the things that you want to do.

Class 3 is where you're limited in your activity, but at complete rest you don't have any symptoms.

And in class 4 is when you have symptoms at rest.

The American Thoracic Society recommended that patients who are in class 3 or class 4 should be referred for a lung transplant evaluation. So anybody who has symptoms at rest or who has severe limitation in their activity level should be referred for evaluation.

Now, the reason that they made those recommendations

is it takes a while to get a lung transplant even if you're appropriate for lung transplant. And the tragedy has always been -- especially when I was on the receiving end of the patients coming in for transplant was when they were sent too late.

It takes at least six months to get through the process of getting cleared to get a transplant. That doesn't even count getting the transplant. Once you're actually listed, then you have to find a suitable donor. And lungs are one of the hardest organs to find a donor because often the patients that are donors are trauma patients because, you know, you have to have a young-enough person, healthy lungs, they have to be nonsmokers, things like that. And the lungs often get injured in trauma, so we can't use those lungs many times. So it's imperative to get these patients into the system and to get locked in with the transplant center early enough so that before they die they get the transplant.

The other criteria that American Thoracic Society recommended was if you feel the patient has less than a 50 percent chance of surviving 3 years that they should be referred for a transplantation at that time.

So if either one of those criteria, if they're class 3 or class 4 performance status or if they are less than 50 percent chance of surviving the next 3 years, that's the recommendations when they should be sent to a transplant center

for an evaluation.
Q. And where does Mr. Stults fall in this process in your view?
A. Well, last year in 2013 when I saw him, he was already class 3 at that point. He was having trouble climbing stairs and feeling short of breath doing activities. But at complete rest if he was doing absolutely nothing, he was able to, you know, feel okay. He didn't feel great, but he was able to sit, watch TV, and do sedentary work.

Since then his symptoms have continued to progress, and now he's short of breath with no activity. He's short of breath just sitting, talking, and from what he told me, he's not able to work now because he's been sent off from his job because he's too short of breath to do his sedentary job, so that puts him into a class 4, so he clearly qualifies for referral for a lung transplant now.
Q. And so is it your view that ultimately because of his age and the natural rate of decline of his lung function that he will need a transplant?
A. Yeah. There's no doubt in my mind he's going to need a transplant to survive, you know, for any extended period of time. He's only 54 years old. Transplants are now being done above age 70. He is going to have the ability to get a transplant in his lifetime. He's going to need it before 70. I can guarantee you that. You know, whether it's in the next

year, three years, or five years, I don't know.

But he needs to be in a transplant center where they're following him every quarter, getting ser -- getting PFTs on him to look for those small declines, to do a six-minute walk test which is a way of measuring his performance. Six-minute walk test is really simple. You have a hallway that has markers on the floor, and you tell him to walk as many times up and down that hallway in six minutes. He can sit down for the whole six minutes. He can walk the whole six minutes. He can do anything he wants to do. But you measure the total distance walked in that six minutes. It's one of the best predictors of decline of lung function when you're looking at pretransplant patients. And to my knowledge that's not being done for him right now. So he needs to have that to monitor when he gets over that edge. He needs to be locked into that program already.

Q. And, doctor, you're familiar, as you've said, with the actual physical transplant -- transplantation of lungs. Can you help describe this for us? First we have just a static diagram so you can tell the jury what they're going to see, but is there a video that you think would be helpful for the jury to actually see a lung transplant?

A. Yes, I have a video that just demonstrates a standard lung transplant. It's fairly short. It's a couple of minutes long. It cuts it down pretty quick.

Q. And do you feel like you could narrate that for us when the

time comes?
A. Yeah, definitely.
Q. But before that begins to run, would you look at these slides and tell us what we're about to see so that your narration may make more sense?
A. Yes. This is a Netter diagram or a standard drawing of a surgical procedure. I was told if I touch this it puts something on the screen. I don't know. Does that show up?
Q. Yep.
A. Okay. Sorry. How do you clear it then after that?
Q. You have to touch the corner of the screen down at the bottom.
A. Oh, great. Did that do it? There. Okay. Sorry.
Q. I just did it, so go ahead.
A. Okay. Thanks. So basically this is the chest as if you made the incision over here on the left side of the screen over here. Did that draw it? There we go.

When a lung transplant is done, generally you do bilateral. You do both lungs. Occasionally there will be the patients where you do just the single lung transplant, but in somebody like Mr. Stults who has bronchiectasis, you would do a double lung transplant because if you just replace one of the lungs, infection that's going on in the opposite side will then contaminate the first side, and so you can't do just a single lung transplant. So he'd have to have a bilateral lung

transplant.

In the video it shows a complete opening across this area. The -- if you go to the B portion of the slide here, it's then open to expose the lung. The lung is taken out of the chest, and then in the video we'll see that we transect across the bronchial tube which is the breathing tube that connects the trachea or the main breathing tube to the rest of the lung, and then it's very simple after that is just transecting the arteries and the vein.

And then the completion of it is just to do the reverse. You take the lung -- and you'll see in the video, you take the lung that's being donated, and you do the reverse order. You put it into the chest. You connect the bronchus, the artery, and the vein, and then you go to the other side, and you do the same thing.

During this procedure there's a double lumen breathing tube. It has two openings in it, and it goes down into the lungs, so while they're having surgery on one side, you breathe for them on the opposite side. So they're breathing on their left side while you're working on the right lung. And then you flip over to the right side; you breathe on the new right lung, and you take out the left lung.

Once the procedure is done, the patients usually come off the ventilator pretty quickly, usually within the day. They do quite well. It's pretty amazing how quickly they bounce back

in the ICU. They're not normal after that. You're trading one set of problems for another. Now you're a transplant patient the rest of your life. So don't think it's like on TV when you get a lung transplant you go dancing down the street after that. They have a lifetime of medical follow-up and a lot of pills they gotta take the rest of their lifetime, and that's if they can stay healthy after the transplant. Only about 50 percent of patients that get a transplant survive five years.

Q. And even for those that do survive, what's the -- what's the general thought about how long a transplant will last?

A. You know, if they do really, really well, then maybe 7, 10, 12 years. You know, we've only been doing them 20 years, so we don't really know, and the medications for rejection are getting better every couple of years. We have new improvements in that, so they're doing better now than they were five years ago. But, you know, is it going to be 12 years, 15 years? I don't know what the life expectancy of a lung transplant patient's going to be.

Q. So even if Mr. Stults gets transplanted as he approaches his 70th birthday, assuming he would have a transplant next year, that's about the end of the useful life of the transplant.

A. To our knowledge today in 2014, yes.

Q. Now, there's still a possibility that maybe technology will improve and he could even receive a second transplant maybe hopefully?

A. At this point that's not what's going on, but that's always a possibility in the future. If we find a way to take our stem cells and grow new lungs, then, you know, maybe we can put a new lung -- you know, grow our own lung in a test tube some day. I mean, that's, you know, pie in the sky, but I know some friends that are working in that area.

Q. Okay. Now, with that explanation, let's look at the video, and you can narrate that for us.

A. Okay. Is the audio going to be on?

Q. No, you're --

A. No, no audio?

Q. -- going to have to narrate that.

A. Okay. Okay. It's a little bit graphic. Par -- you know, pardon me for that.

(Video was played in open court.)

A. So this is after the chest has already been opened. So this is that line that was made across in the cartoon. This is the upper portion of the chest up this way. The head would be up here, feet down this way. And you're looking inside the chest. This is the right lung, and the left lung is obscured by the surgeon's hand over here. Okay. You can roll that.

(Continuation of video.)

A. So the surgeon is exposing the right lung at this point. At this point he's getting down to the stalk where I told you that the artery and the vein were. He's removed the diseased

lung. And that's what a diseased lung looks like unfortunately.

Now he's preparing the donated lung to be inserted into the chest. He's preparing the new bronchial tube, trying to trim it down to make it match the size of the patient's trachea, and he's going to sew it together which is what he's doing right now. He's trimming so it matches up the same size. Still trimming and preparing to attach it at this point. And this is what the lung looks like when it arrives. You can see it's all pale and white.

Q. This is the new lung?

A. This is the new lung, yes. As opposed to diseased, unhealthy lung that you saw in the previous picture that was all black, this one is white because it's been -- it's being oxygenated in a bath of fluid, but it doesn't have blood going through it, so it's not red, so it's kept alive in a cool fluid with oxygen in it, but it's ischemic. It's not getting enough blood supply through the organ, so it's, you know, as if you didn't have blood supply to the leg or something and they get very cold and almost blue looking, so this is what it would look like before.

So now he's preparing -- this is doing the opposite side. This would be the other lung. He's preparing it, preparing the bronchus, trimming off the excess fat. So you can see the new right lung over here has already been placed in, and he's now inserting the left lung. He's attaching -- this spot

right here is the breathing tube coming down from his trachea, and he's going to attach the new left lung to the patient's native bronchial tube, and he's suturing it on there right now. So he has to go all around this circle to attach it.

Now he's got it attached, and now he has to -- well, he's still attaching it. And then after that's attached, then he'll start attaching the blood supply, the artery and the vein, to the lung.

Q. How long does this whole process take in realtime? This has been cut down sub --

A. Oh, probably anywhere from four -- it depends on how many adhesions are in the chest. It depends on how complicated the chest is. If you've had a lot of infections, there can be a lot of scar tissue, so the process of taking out the old lung can be quite extended. It could take a couple hours to get the old lung out before you even try to put the new lungs in.

Probably the easiest part of the procedure is putting the new lung in, but you'd say, you know, four hours to six hours is the procedure. It depends on how many people are on the team and how many people are doing things at the same time.

Q. Is this just attaching the --

A. They're still attaching the new lung to -- now they're attaching the arteries and the veins to the -- from the new lung to the patient's arteries and veins so they can then start the blood supply, and now there's blood supply going to the lung.

You see how it's getting nice and pink and red as the blood is going to the lung. So they've got two nice healthy-looking lungs there.

Q. And this whole time the patient lungs remain open -- or the chest wall remains open so that they can have enough room to work.

A. That's correct, yes. There's -- people do this procedure different ways. Some do it through two separate holes on each side, and others do it this way through the line across the middle. That's surgeon preference. This is just more of attaching arteries and veins what they're showing right now.

Q. And so this is the new lungs?

A. Uh-huh. And now he's sewing the chest closed with steel sutures to pull it tight.

Q. And that's essentially a very condensed version of the surgery?

A. That's three minutes of four to six hours, yeah.

Q. And it's -- one -- does one make the decision to recommend that a patient have a lung transplant lightly, doctor?

A. Absolutely not.

Q. What is the only reason to make such a suggestion to Mr. Stults?

A. It's a decision that you make in discussion with the patient. You know, hopefully you've built a rapport with somebody. It's really when they come in the first time you see

them and they're already so severe that they're already at a point where they need lung transplant. That's really heart breaking to try to tell somebody you don't have anything to offer them but a lung transplant. But hopefully over time you've developed a rapport with them and you've been preparing over time that they're approaching this point, and they've now just crossed that bridge where they need to go at least initiate the process. You know, I always talk about it in terms of the tragedy is waiting too long to go.

Q. Now, after they're done and they're closed up, do they have to generally remain in a treatment center for a period of time?

A. Yes. They're usually in the hospital for about a week or so. But most centers and the ones that I work with will keep the patient close by. Even if they live out of town, they live in a residence near the hospital or in something attached to the hospital where they're basically outpatients, but they're still getting almost inpatient care because they have to come back every day. They have to get checked. They have to be monitored for rejection. You're constantly adjusting their anti-rejection medications. You have to be checking their levels of their rejection medications. There's a lot that goes on in that first 30 days.

One of the qualifications to get a transplant is to have a strong support system and to pass all the psychological evaluations because if somebody is going into this on their own,

they actually don't get approved for transplant because this is such an intense process, they have to have support with them. They have people to drive them around, take them to their doctor's appointments, make sure they're getting to physical therapy so they can recover from the surgery.

These people are usually someone that hasn't been active for some time. Now we give them new lungs and we expect them to go run around. Well, in the '90s we were seeing that patients were rupturing tendons because they weren't used to doing any exercise. So we learned we had to go real slow in how we recovered their activity level.

So we start them off, you know, really just walking with physical therapy very slowly because their Achilles tendons would pop because they hadn't been used to walking stairs and doing things like that for so long.

Q. Now, Dr. Pue, there's a cruel irony about a patient with bronchiolitis obliterans getting a lung transplant, isn't there?

A. Yes, there is.

Q. What is it?

A. Well, the disease of rejection in lung transplant is bronchiolitis obliterans. So before bronchiolitis obliterans was diagnosed, it was described in the patients with diacetyl exposure. The only patients I had ever seen with bronchiolitis obliterans in my career before that all were lung transplant patients. And when we are monitoring patients who have a lung

transplant, there's no reason that they would get bronchiolitis obliterans from previous diacetyl exposure or anything like that. But you go down into their lungs regularly, and you do biopsies. You put a scope down their lungs. They get so used to get scoped they get very minimal medications, and their lungs don't have any nerve attachments, so they don't even really cough anymore. You just slide a scope down there, take a couple of biopsies, and you do that in the beginning every day, every third day. And then you spread it out to every week, and then it goes to every month and then, you know, maybe every three months to six months the rest of their life, but you're monitoring for bronchiolitis obliterans which in this case is the disease that caused him to need a lung transplant.

Q. So bronchiolitis obliterans develops in transplanted patients through antirejection mechanisms or -- or rejection mechanisms that the body has to this invading foreign set of lungs?

A. Yes. Bronchiolitis obliterans is an inflammatory disease process where there's inflammation going on in those small bronchiole tubes. Well, in rejection of a transplanted lung, that's the battleground is in the small bronchioles, same place that it is in the -- in patients who have diacetyl exposure.

So that's where we try to get the biopsies from because if we can head it off early with these special antirejection medications, we can slow the process. We usually

don't stop it completely, but that's where, you know, patients usually will die of rejection at some point or they die of infection because we give them so much antirejection medications that they can't fight off infection, and they die from just a run-of-the-mill infection that we're all exposed to every day. You know, there's fungus in the carpet and bacteria on our hands and somebody coughs on you, whatever it is. We would normally handle that with our normal immune system. These people don't have the ability to fight off those infections, and they ultimately die from the medication that was keeping their lungs healthy.

Q. So if Mr. Stults now has bronchiolitis obliterans and most likely will get it again after transplantation, why do it at all?

A. Hopefully give him another 10 to 15 years of life with health, at least give him some time of having good health again. You know, at this point his quality of life is declining. With transplant it's -- you know, you're rolling the dice a little bit. You have a 10 percent chance of not making it out of the first year, and it goes down by 10 percent each year. Once you get to about five years, if you are doing okay, it generally levels off at that point. So if you make it to five years and you haven't died by that point, you have a fair chance of making it to ten years.

Q. Doctor, have you stated these opinions to a reasonable

degree of medical certainty if I didn't ask you individually, but all the opinions that you've offered, have they been to a reasonable degree of medical certainty?

A. Yes, all of the opinions I offered today are to a reasonable degree of medical certainty.

MR. MCCLAIN: Thank you, Dr. Pue. That's all the questions I have.

THE COURT: Thank you, Mr. McClain.

Why doesn't everybody take a stretch break. And then we'll turn to the cross-examination.

Thank you. Please be seated.

MR. HILL: Thank you, Your Honor.

THE COURT: You may cross-examine. Thank you.

CROSS-EXAMINATION

BY MR. HILL:

Q. Good afternoon, Dr. Pue.

A. Good afternoon.

Q. Want to start with just a quick question about your experience. You have not published any papers related to bronchiolitis obliterans in any way, shape, or form, have you?

A. Not at this time, no.

Q. Okay. And you are not an expert in rheumatology; is that correct?

A. I'm not a rheumatologist, but as part of pulmonary medicine, we often are taking care of patients who have

rheumatologic diseases. So much of what we do in pulmonary is rheumatologic disease.

Q. My question, though, was is you are not licensed as a rheumatologist; is that fair?

A. I'm not a board-certified rheumatologist. That is correct.

Q. And I think you just described it. But would you agree that rheumatology --

THE COURT: That actually wasn't your question. Your question was you're not an expert in rheumatology. You can be an expert in rheumatology and not be board certified.

MR. HILL: I'll ask it another way.

THE COURT: Yeah, you actually changed your question.

MR. HILL: Sure, Your Honor. I'll ask it a different way.

THE COURT: Okay.

BY MR. HILL:

Q. You do not hold yourself out as a rheumatologist or an expert in rheumatology other than as you described as it may relate to lung diseases. Is that a fair way to say that?

A. I am not a rheumatologist. I'm not a board-certified rheumatologist. But as the part of the practice of pulmonary medicine, rheumatology is a part of what I do for a living. So I consider myself an expert in pulmonary rheumatology if you want to use that terminology.

Q. You would agree that there are doctors, pulmonologists, who

specialize in autoimmune diseases as they affect the lungs.
A. There are pulmonologists who are experts in that area. But all pulmonologists who take care of pulmonary patients have to be expert in rheumatologic pulmonary disease. It's part of what we do. It's a large part of what we do.
Q. Well, would you agree that a person with a autoimmune disease such as rheumatoid arthritis, that that condition can cause damage and disease in the lung?
A. Yes, that's true.
Q. And you would agree that rheumatoid arthritis can cause bronchiolitis obliterans or constrictive lung disease. Would you agree with that statement?
A. I agree that rheumatoid arthritis can cause interstitial lung disease which is a restrictive lung disease, yes.
Q. And I think you just said that prior to your experience, your meeting Mr. McClain and being involved in cases like this, that the only time you had seen bronchiolitis obliterans in your practice is in patients that had had a lung transplant.
A. That's all that I could recall off the top of my head, yes.
Q. And so prior to your involvement here, you had never seen or never treated a patient who was suffering from constrictive lung disease due to rheumatoid arthritis.
A. I disagree with that.
Q. Okay. You had not seen a patient in your estimation who had received bronchiolitis obliterans from rheumatoid arthritis;

is that --
A. I had never seen a patient who had a biopsy that showed bronchiolitis obliterans associated with rheumatoid arthritis.
Q. So you had not had any experience with that type of patient.
A. As I stated previously, I have experience with patients with rheumatoid arthritis and rheumatoid-associated lung disease, but I've never seen a case of a patient who had a biopsy-proven bronchiolitis obliterans with rheumatoid arthritis as the only inciting event.
Q. So if someone were to testify that they have experience with patients who have bronchiolitis obliterans as a result of rheumatoid arthritis, you would agree that they would have more experience in dealing with a patient like that than you have.
A. I can't suppose what somebody does or does not have without talking to them, finding out what their experience is.
Q. I was just assuming -- you can assume for the sake of this discussion that if a person were to testify that they did have that experience, you would agree that they would be more experienced in that field than you are.
MR. MCCLAIN: Objection.
THE COURT: What's the basis?
MR. MCCLAIN: Lacks foundation. How can he . . .
THE COURT: Sustained.
BY MR. HILL:

Q. Are you aware that there are experts that have been identified by IFF who do have experience with patients who are suffering from rheumatoid arthritis and also suffering from bronchiolitis obliterans due to that disease?
A. I'm not familiar with who the experts for IFF are. I don't know anything about your side of the case.
Q. So you have not read the expert reports that have been provided by --
THE COURT: He just said he didn't know anything about your side of the case. How could he have read the experts' reports?
MR. HILL: I just want to make sure, Your Honor. I'll move on.
THE COURT: Well, you know . . .
Go ahead.
MR. HILL: Sure.
BY MR. HILL:
Q. You were the first expert that Mr. Stults visited in this case after he had contacted Mr. McClain; is that correct?
A. I don't know if that's the case or not.
Q. Okay. You -- Mr. Stults visited with you in July of 2011.
A. That's correct, yes.
Q. And during that meeting, you took a history of Mr. Stults's alleged exposure to microwave popcorn.
A. That's correct, I did.

Q. And you would agree that when you are visiting with or evaluating a person like Mr. Stults that it's important to get an accurate history.
A. I try to take as accurate a history as possible, yes.
Q. And most of the times the only source of the alleged microwave popcorn exposure is from the person you're evaluating themselves.
A. When you take a history, by the nature of what a history is, you're asking the person the question. They provide you information, so that's -- by the definition that's what it is.
Q. Exactly. And when you first visited with Mr. Stults in July of 2011, I think you've testified here that he gave you a history of exposure from 1991 but only up until 2004.
A. That's what he had told me at that time, yes.
Q. And at the time he indicated that he stopped consuming microwave popcorn in 2004, he didn't indicate to you that he had any uncertainty about that history, did he?
A. I don't recall specifically whether he indicated he had uncertainty or certainty. I just asked him when he had been eating microwave popcorn, and that's the history he gave me.
Q. And had he noted that he was uncertain or told you, you know, I don't really know, I need to go back and think about it more, I need to discuss it with my wife, if he had indicated to you that he was uncertain, that's something you would have put in your report?

A. If he had said anything other than that, that's what I would have indicated in my report.
Q. Two years later or more than two years later in September of 2013 -- that is when you gave your sworn testimony in this case.
A. That's correct, yes.
Q. And in that over two-year period between the time that Mr. Stults gave you his initial history up until that two-year period later, he never contacted you to tell you that, oh, I was mistaken; I gave you the wrong history.
A. He did not attempt to contact me, but I don't accept phone calls from patients who are independent medical evaluations. If they do try to call, I refer them back to their attorneys because I'm not their treating physician.
Q. If he had contacted his attorneys and said, hey, I gave an incorrect history to Dr. Pue, would you have accepted a call from his attorneys if they had indicated to you, hey, we have a patient who you've evaluated who needs to correct something that they told you during your evaluation?
A. That -- I would accept a phone call from the attorney because that's who I'm communicating with.
Q. So if Mr. Stults had wanted to contact you, he could have done it through his attorneys.
A. If that's what he had wanted to do, that's how he could have reached me, yes.

Q. And the only way that you figured out that he was changing his history to add almost 11 years to that history is because you called him 3 days before your deposition.
A. Well, I had called him to get an update on his condition because they were going to be deposing me. I think it was June of 2013. And I thought it was reasonable to give him a call just to get an update on his condition, see what had changed since 2011 so I'd be accurate in my deposition. And he offered that information that he had gone home, and after he had met with me, he talked with his wife, and she said no, those dates aren't right, and that's what he had told me at that time.
Q. And during that phone call, did Mr. Stults tell you that he actually continued to consume microwave popcorn at least occasionally all the way up until January of 2011?
A. I'd have to see my written notes on that. I don't remember if that's exactly what he said.
Q. You don't find it's important in testifying here today to know what the history is that the patient who you've evaluated is before providing your testimony.
A. Can you rephrase that question? I'm not sure what you're asking me.
Q. Sure. Sure. You have indicated that you -- you at least agree that you recall today that Mr. Stults, when you talked to him on the phone before your deposition, that he did change his history and that previously he'd indicated he stopped in 2004

but that on that call he indicated that he was wrong and that he actually continued to consume it beyond that period.

A. That's correct.

Q. And assuming that he told you that he had consumed it at least occasionally up until January of 2011, that would be approximately six months before you actually first visited with Mr. Stults in July of 2011.

A. That's correct.

Q. So it'd be fair to say that when he visited with you in July of 2011 he forgot to tell you that, oh, I consumed popcorn just 6 months ago as opposed to 7 years ago as reported by him during that interview.

A. What I had asked him -- you know, when you ask somebody a question, how you ask it often changes the answer. And I don't know if I asked him specifically when's the last bag of microwave popcorn you ever popped. I don't think I ever asked him that question. I said when -- usually what I say to people is, do you eat microwave popcorn? How often were you eating it? Were you eating it regularly, something like that?

And what -- the answer that he gave me was when he was eating it regularly which was from '91 to 2004 when he specifically said he was popping 2 bags every night when they put their kids to bed and he came up with the year 2004 because he was thinking that was around the time that his -- I believe it was a daughter -- I forget if he had a son or daughter but

when their child was old enough that they weren't putting the child to bed like they were, so they kind of changed their routine a little bit. So that's where he related that date from, 2004. I don't know that I specifically asked him, "Did you ever pop another bag of popcorn after 2004?"

Q. You would agree that you did not try to influence his answer when you asked him that question in July of 2011.

A. I try to ask open-ended questions and let people give you the answer that they have. To then follow up with other questions, you know, helps. But I'm not trying to lead them in any way, shape, or form in either direction. I just want to know what the information is.

Q. And you've indicated that you believe maybe he misunderstood you because he thought you were only asking about regular consumption.

A. I can only suppose what he thought. I can't tell you what he thought I was asking.

Q. And he's never provided that as an explanation to you, has he?

A. He just had told me when I talked to him on the phone that when he went home and talked to his wife he thought the dates were different than when he had met with me.

Q. Right. So he did not give you the explanation that he misunderstood your question in any way in July of 2011.

A. He didn't say that specifically, no.

Q. I want to talk now about the pulmonary function tests that you discussed on your direct. And I believe you performed some of those tests in July of 2011.
A. They were performed at the hospital at my direction. I didn't actually do the tests on him.
Q. And you had other tests performed on Mr. Stults at that time including O_2 saturation tests.
A. Correct.
Q. Total lung capacity tests.
A. Correct.
Q. And when you had the testing done for Mr. Stults in July of 2011 for O_2 saturation, the tests came back with a 95 percent saturation on room air at rest.
A. That's correct.
Q. And that's within the normal range.
A. That is within the normal range but is not normal. The term normal range for oxygen saturation is a misnomer. We consider anything 90 percent above, quote, unquote, normal because we don't start giving people oxygen treatment until they're below 89 percent. But it's not normal to be 95 percent. You should be 98 or 99 percent if you have normal lungs.
Q. He did not require any oxygen therapy at that time.
A. That's correct. You don't need oxygen therapy until you're 89 percent or low -- or below 89 percent by Medicare guidelines.
Q. And you're not aware of any instance since you tested

Mr. Stults where his O_2 saturations have fallen below 95 percent.
A. No. In bronchiolitis obliterans the oxygen saturation's one of the last things to go down.
Q. And so hypoxia is not something that's normally a concern with bronchiolitis obliterans.
A. That's not one of the primary concerns. It's a late finding.
Q. And one of the other tests that you perform that you've discussed is the FVC. I think it's called the forced -- the forced vital capacity?
A. That's correct, yes.
Q. And at the time that you tested Mr. Stults' forced vital capacity, it was found to be 85 percent in July of 2011.
A. That's correct, yes.
Q. And you would agree that is a normal finding.
A. That is above the lower limit of normal which is 80 percent. But normal is a hundred percent.
Q. But a patient who has 84 percent or 85 percent forced vital capacity, that would not lead you to a diagnosis that they had bronchiolitis obliterans, would it?
A. No. Actually forced vital capacity usually stays normal in bronchiolitis obliterans until they're really end stage.
Q. And that's what's happened in this case; correct? His forced vital capacity has stayed normal up until the present time.

A. That's correct.
Q. And that would be true regardless of the cause of the bronchiolitis obliterans; is that fair?
A. Bronchiolitis obliterans has a certain presentation, and he demonstrates that presentation, yes.
Q. And that would be true regardless of whether the bronchiolitis obliterans was caused by some other cause other than exposure to microwave popcorn.
A. When you say is that true, if you're referring to the pulmonary function test abnormalities, that's correct.
Q. That's all I'm talking about right now are the pulmonary function tests.
A. Yes, the pulmonary function tests don't tell you why you have bronchiolitis obliterans. They just tell you a pattern; it looks like bronchiolitis obliterans. That's only one small piece of the puzzle.
Q. And so that was the point I was getting to is that there's nothing from the objective pulmonary function tests that differentiate the cause of the bronchiolitis obliterans as you noted here.
A. That's correct, because the pulmonary function tests are not used to differentiate the cause of the bronchiolitis obliterans. They only tell you if somebody has a pattern that looks like bronchiolitis obliterans.
Q. Now, one of the values is the FEV1 which has been discussed

here a lot, and at the time that you measured Mr. Stults' FEV1 again the first time you saw him, July 2011, your measured value was 39 percent I believe is what you testified.
A. That's correct, yes.
Q. And have you seen Mr. Stults' pulmonary function test results from March of this year?
A. I believe I have, yes.
Q. And would you agree that those test results showed that in March of this year, 3 1/2 years later, Mr. Stults's FEV1 has actually increased to 43 percent?
A. Uh-huh.
Q. Is that -- is that correct?
A. I believe that's the value. I don't have it right in front of me to confirm it.
Q. Would you like to look at the report?
A. Sure. I'd like to be accurate.
MR. HILL: May I approach?
THE COURT: You may. Thank you.
BY MR. HILL:
A. I was actually looking for the actual PFT themselves. This is the report of the PFT.
Q. Do you have any reason to dispute that the report of the PFT does not accurately reflect the PFT results?
A. Whenever I look at a PFT, I always look at the curves to ensure that it was done properly. That's the proper way to

review a PFT.
Q. Right. But do you have any reason to believe that these values are inaccurate?
A. I'm just telling you that my standard of practice is whenever I look at a PFT I always look at the curves to ensure that it's accurate because there's a lot of operator error.
Q. Okay. Well, the question simply is do you have any reason to believe that Dr. Schmidt in performing these tests misrepresented the PFT values when she issued this report?
A. I have no reason to believe that she didn't dictate or write down the numbers that were on the report. But you asked me about do I believe it, and I can't tell you that I believe the data unless I see the curve.
Q. This is the only data that you've been provided; is that correct?
A. To my knowledge, yes.
Q. Okay. So when I asked you if you had seen the PFT function test and you said yes, I assume you were talking about this report; is that fair?
A. You asked me if I saw the numbers.
Q. Right. Okay. Exactly. So according to these numbers which is all we have that's been provided to us, what we have is a 43 percent value for FEV1 in March of 2014 of this year.
A. That's correct. On this report that's what it says, yes.
Q. And that is the most current PFT value for FEV1 that you're

aware of?
A. To my knowledge, yes, but as I said, I haven't seen the patient recently, so I don't know.
Q. And do you know whether Mr. Stults was scheduled to have a new PFT test done on July 31 of this year?
A. I have no knowledge of that.
Q. And if he did have a test like that -- you said you had no knowledge -- you obviously have not been provided those tests.
A. That's correct.
THE WITNESS: Your Honor, may I comment more on the PFTs?
THE COURT: No. You can only respond to his questions.
THE WITNESS: Okay. Okay. Sorry.
THE COURT: And then Mr. McClain will have an opportunity to ask you on redirect.
THE WITNESS: Okay. Sorry about that.
THE COURT: That's okay.
BY MR. HILL:
Q. When you talked, doctor, about the signs of bronchiolitis obliterans and you mentioned air trapping --
A. That's correct, yes.
Q. And you also mentioned a mosaic pattern on the CT scan.
A. Yes, that's correct.
Q. And you also mentioned wall thickening in the bronchioles.

A. That's correct, yes.
Q. And you also mentioned bronchiectasis, and I'm terrible at pronouncing that, but I think you know what I'm referring to.
A. Yes, bronchiectasis, yes.
Q. And of all four of those conditions, they would present the same regardless of the cause of the bronchiolitis obliterans.
A. They are the findings that are used to diagnose bronchiolitis obliterans, but they don't tell you the cause of the bronchiolitis obliterans.
Q. So the fact that Mr. Stults had those indicators per your review, that is not specific to him having bronchiolitis obliterans just from consuming microwave popcorn.
A. That's correct.
Q. And when you talked about -- turning back real quickly to FEV1, I think you testified that you would expect a .021-liter drop just naturally as you age on a yearly basis.
A. That's correct.
Q. And you were, I believe, trying to make the point that, well, his FEV1 had dropped to 39 percent by the time that you saw him and that -- so, therefore, there would have had to have been a long period of time if you were just using the annual average of someone who doesn't have a disease.
A. No, that's not correct. That's not what I meant.
Q. Well, you referenced the .021 decline per year.
A. Correct.

Q. You would agree that if you have bronchiolitis obliterans from, let's say, another cause unrelated to microwave popcorn and that existed prior to the time you did the testing, that that disease would have caused a drop in FEV1 of a greater amount than .021 point year -- per year.
A. I don't understand your question because I feel like you're misrepresenting what I said earlier.
Q. I'll be happy to rephrase it. That'd be great.
A. Okay.
Q. Because last thing I want to do -- I want to understand what you testified to.
A. And perhaps I wasn't clear earlier when I testified in that area.
Q. Sure. If Mr. Stults was suffering from a autoimmune-caused restrictive lung disease or constrictive lung disease prior to you testing him in July of 2011, you would agree that could be the cause of his FEV1 being 39 percent.
A. All I can surmise from the FEV1 of 39 percent was that he had an ongoing lung disease for an extended period of time prior to me seeing him. It doesn't tell you what the cause was just by that factor.
Q. Thank you. In 2011 when you first saw Mr. Stults, you did not believe at that time that he required a lung transplant.
A. No. In my report I indicated I thought that he would need an evaluation for a lung transplant within the next two years.

Q. And I believe that you would agree that if you progressed from the point where you don't need the lung transplant as was his status in July of 2011 to a point where you would need to be evaluated for that, that you would see a drop in the FET (sic) values between those two periods of time.
A. No, I don't agree with that statement.
Q. So you believe that the evaluation for a lung transplant is completely irrespective of the pulmonary function of the person as indicated on these objective tests.
A. I didn't say that either.
Q. Okay. Please explain what you mean.
A. Okay. As I reviewed earlier, the ATS guidelines do not take PFTs into account for when you refer a patient for a lung transplant evaluation. He meets all the criteria now. He was probably borderline in 2011. He probably should have been referred for evaluation in 2013 when I talked to him on the phone. And in my opinion, he definitely should be referred for evaluation at this point. Meets all the ATS criteria.
Q. If Dr. Egilman testified that FEV1 was a criteria for a lung transplant, you would disagree with that testimony.
A. I would -- I don't know in what context he answered that question. FEV1 contributes, but I've had patients get lung transplanted when their FEV1 was as high as this or higher, and I've had patients who had lower numbers than this who weren't quite ready for transplant and were still being monitored.

So it really -- the FEV1 is a number. When you make a decision for transplant, you have to look at the whole patient. And if all you're looking at is a single number on a page and you say, oh, that FEV1 hasn't reached X number yet, you can't be transplanted, you're doing a disservice to the patient. You gotta look at the whole patient and see what their performance status is, see what their life is like, and that's really what you make your decision on.

Q. So FEV1 can be a nonfactor when it comes to a lung transplant decision.

A. I think that's too strong to say it's a nonfactor. It's one piece of the decision-making process. You know, these decisions are made by looking at all the data together, evaluating the patient, doing a thorough history and exam, and patients have to enroll in rehab and do that for six months. I mean, there's a lot that goes into the process. It's not just a simple process.

Q. But you've agreed that it's not part of the designated criteria for applying for a lung transplant.

A. It's not part of the designated criteria for ATS for recommendations to refer the patient for a lung transplant evaluation.

Q. Thank you. And Mr. Stults could, as you've opined, qualify for a lung transplant under this scenario regardless of the cause of his bronchiolitis obliterans.

A. That's correct, yes.
Q. So it's possible that if he needs a lung transplant in the future it could be due to bronchiolitis obliterans having been caused by an autoimmune disease or other form of constrictive bronchiolitis.
A. That's not my opinion. My opinion is that his bronchiolitis obliterans was caused by the exposure to the diacetyl.
Q. I understand that, doctor, and I appreciate that. What I was asking is that he could be in the same situation even if his cause of bronchiolitis obliterans was unrelated to exposure to microwave popcorn.
A. If you look at it in a vacuum independent of what got him to where he's at and he went to the transplant center, they would make the decision for a transplant independent of what his diagnosis is. They would just look at where he is today. So it would be -- they wouldn't care what the diagnosis is that got him to this point.
Q. Right. And what got him to that point could be lung disease associated with rheumatoid arthritis.
A. I don't agree. I believe his disease is from diacetyl exposure.
Q. Again, maybe I'm not asking the question appropriate. I'm not saying -- I'm not questioning you as far as what you believe. I'm saying that it's possible that his rheumatoid

arthritis, if he were to have that, would cause the bronchiolitis obliterans that would then lead to a lung transplant.

MR. MCCLAIN: Object to the form of the question. It lacks foundation.

THE COURT: Overruled. You may answer.

A. Could you repeat the question for me or have it read back?

Q. Sure. I'll repeat the question.

A. Okay.

THE COURT: Well, why don't we see if Shelly's been taking anything down during the trial and have her read it back.

MR. HILL: Sure. That'd be great.

THE COURT: I always like to test her once during a trial.

(The requested portion of the record was read.)

A. I guess it's -- I'm not able to answer the question the way you're asking it because you're asking me to suppose he has a disease that I don't think he has, so I don't know how to answer that question.

Q. I understand. It's very simple -- I'm trying to make it a very simple point, and that is --

A. Sorry if I'm making it difficult. I'm just not following.

Q. That's all right. It's very simple, and that is that it is possible for rheumatoid arthritis to lead to the need for a lung transplant.

A. Yes. I've seen patients with rheumatoid arthritis who have rheumatoid lung progress to the point of needing a lung transplant. That is true.
Q. And would you agree that the reason that you've ruled out rheumatoid arthritis in this case, as you stated, is because Mr. Stults technically doesn't meet the criteria of the American College of Rheumatology regarding qualifying for studies related to rheumatoid arthritis?
A. I don't know that I would use the word technically. He doesn't meet the criteria for rheumatoid arthritis by any of the guidelines I've ever seen.
Q. And the guidelines have a certain number of criteria; correct?
A. That's correct.
Q. And do you know how many criteria there are?
A. I know there's many, but I always look them up when I'm trying to make a diagnosis like that so I do it properly. You need some major and some minor criterion, and you add it up, and then that's how you make the diagnosis.
Q. And do you know how many of those criteria are necessary to meet the diagnosis?
A. Not off the top of my head.
Q. Are you familiar with the textbook Institutional Lung Disease, Fifth Edition by Dr. King?
A. Interstitial Lung Disease --

Q. Yes.
A. By Dr. Keen?
Q. Yes.
A. I'm not sure if I'm specifically familiar with that one. I may or may not be. I'm not sure. What year is it published?
Q. It's the fifth edition. I have it right here. It's published in 2011.
A. Okay. Can I just see the cover real quick just to see if it rings a bell with me?
Q. Sure. I'll give it to you if I can approach. I'm sorry.
THE COURT: You may.
A. It's Schwartz -- I misunderstood. I thought you said Dr. Keen. It's Schwarz and King.
Q. It's Schwarz and King.
A. Yeah, okay. Yeah, Talmadge King, yeah, okay. I thought you said Keen. I apologize.
Q. Sorry if I mispronounced it. Would you agree that that textbook is a reference that pulmonologists use in treating patients?
A. The reason I hesitate on that is I don't know any pulmonologists that still use textbooks anymore. We're all electronic now.
Q. Okay. Let me rephrase it. I'm sure this is online. If you were to research it or to access it in an electronic format, I'm talking about the content of it.

THE COURT: Yeah. Excuse me. The problem is you saying you're sure it's online is testifying, and lawyers can ask questions, but they can't testify. So you can rephrase the question and refrain from offering your own view.

MR. HILL: Sure, Your Honor. I didn't mean to testify in any way.

BY MR. HILL:

Q. How about I do it this way? Do you recall at your deposition whether you were asked about this specific textbook?

A. I don't recall that specifically, no.

Q. Okay. Well, let me just ask it this way. Do you agree with the statement that rheumatologic studies have estimated that up to 25 percent of patients with features of systemic autoimmune disease do not fulfill the American College of Rheumatology classification criteria for connective tissue disease?

A. I don't know if 25 percent. It seems high. But there may be some.

Q. You have no reason to dispute that statement.

A. I haven't done any research in that area to specifically comment on that.

Q. And that's outside the scope of your practice?

A. When you're talking about systemic rheumatologic diseases, that's not specifically in my practice. My practice is pulmonary rheumatologic disease.

Q. And one of the markers for a systemic autoimmune disease we've talked about it is the anti-CCP test.
A. Yes, that's correct.
Q. And you've just said that the interpretation of the anti-CCP test is something that would be outside of your scope of practice as you just described because of your unfamiliarity with the rheumatology and the use of the anti-CCP test.
A. I don't agree with that statement.
Q. You would agree that anti-CCP tests are a marker or indicator for the presence of rheumatoid arthritis.
A. It's one of the markers for rheumatoid arthritis, that's correct.
Q. And that the accepted specificity for a positive anti-CCP test for the presence of rheumatoid arthritis is 95 to 98 percent.
A. It's about 95 percent in the literature I'm familiar with which means that 19 out of 20 will be correct, but the 20th one is incorrect.
Q. Right. And Mr. Stults in this case has multiple extremely high anti-CCP positive tests.
A. Yeah, I don't think there's any dispute that his CCP is elevated. When you're talking about specificity as you mentioned, specificity means that the test is specific to the disease you think it's -- that it's diagnosing. So in 19 out of 20 cases, it would be specific to rheumatoid arthritis. But in

the 20th case, it's something else.

MR. HILL: Thank you. That's all I have.

THE WITNESS: Okay.

THE COURT: Thank you. Any redirect?

Why don't we give everybody a stretch break first.

MR. MCCLAIN: Sure.

THE COURT: Thank you. Please be seated.

Mr. McClain?

MR. MCCLAIN: Real quick.

REDIRECT EXAMINATION

BY MR. MCCLAIN:

Q. You said rheumatoid arthritis is related to interstitial lung disease.

A. That's correct.

Q. Is that an important distinction to make?

A. Yes, it is.

Q. Interstitial -- would showing a lung diagram, could you explain it better by -- what interstitial lung disease is as opposed to what Mr. Stults has?

A. Yes.

MR. MCCLAIN: Scott, can you find that diagram? Sorry I didn't give you any advanced notice. Well, that might help, but I was really thinking -- I have the board here. Let me see if this will work.

Q. Is that -- could you -- does that help or just --

A. Yes, I can do it from that.

THE WITNESS: Your Honor, should I walk to the -- to point to it, or should I stay here or . . .

THE COURT: Whatever Mr. McClain's going to want to do here. If you do step down from the witness box, I'd ask that you use a lavaliere mike, and my law clerk Matthew will help you with that. So that way -- it's a big courtroom, and it's hard to hear, but if you have a lavaliere mike, everybody can hear you.

MR. MCCLAIN: Yes, Judge. If it's possible --

THE COURT: Would you like him -- would you like Dr. Pue to step down?

MR. MCCLAIN: I would, please.

THE COURT: Okay. You may step down. Thank you.

BY MR. MCCLAIN:

Q. You have two tools here to use in terms of trying to explain the difference between interstitial lung disease and bronchiolitis obliterans so that the jury will understand what distinction you're making, doctor, if -- and I have a pointer here somewhere too if that would help.

A. This is good. I usually talk with my hands. My residents all know to stay out of my way because when I'm teaching, I talk with my hands. The -- can you hear me okay, everybody?

So this is the breathing tube where the bronchiole that's the area in question -- when we're talking about

bronchiolitis obliterans, this is what it normally looks like, and then this is what it looks like when it obliterates which is where the name bronchiolitis obliterans, itis, because this is all inflammation. All these little purple dots with pink around them are all little inflammatory cells.

And what it does is it starts from the outside and it just keeps getting smaller and smaller and smaller and smaller, so the airway obliterates.

When we're talking about interstitial lung disease, what you see normally in rheumatoid arthritis, it's in these fine, lacy-like architecture of the lung. It's the superstructure of the lung. It's what everything hangs off of because the lung is just a bunch of little air sacs. So all these little fine areas that are just two cell layers thick, they get filled with scar tissue. And as that scar tissue fills these areas, then the air can't get into the bloodstream. So the bronchioles don't get affected by interstitial lung disease. The interstitium or the fine architecture, the little fine lines or the lacy parts of the lung, become thick and stiff. And that's what interstitial lung disease is. It's two totally different parts of the lung. This is the breathing tube, and then this is the parts that support the lung.

Q. And does Mr. Stults have interstitial lung disease?

A. He does not have interstitial lung disease. The diffusion capacity, the test that was on the right-hand side of my graph

that I talked about where we have the patients inhale carbon monoxide, the carbon monoxide has to travel from this air space into the bloodstream. These are where the blood is running through these small areas of interstitium and has to travel through that cell layer there.

As that gets thicker, it takes longer for the carbon monoxide or air, oxygen, to travel through that thickened wall. So the thicker it gets, the slower the carbon monoxide or oxygen moves through there, and that value goes down. His is normal.

Q. So he has no interstitial lung disease which you would expect to find with rheumatoid arthritis-related lung disease. Now -- is that true?

A. That is correct, yes.

Q. You also said something that caught my ear which is that interstitial lung disease or RA lung disease is restrictive in nature.

A. That is correct.

Q. Does Mr. Stults have restrictive lung disease?

A. He does not.

Q. What does he have?

A. He has obstructive, obstruction of flow. The FEV1, the FVC are down. But his lung capacities are normal to up which is the opposite of what you'd see in restrictive disease. If it's restrictive disease, these areas that are involved, the flows stay good. The FEV1 and the FVC stay good, and the total lung

capacity and the residual volume, how much air you can get in your chest when you take a deep breath in and how much air is in your chest when you exhale, that goes down because you've got stiff, small lungs.

Q. So in both instances he doesn't have interstitial lung disease; he has bronchiolitis obliterans. He has obstructive disease, not restrictive disease on both counts. Is his disease consistent with RA lung disease?

A. Absolutely not.

Q. You can retake your seat. Now, in regard to this question about number of bags consumed, when -- did you make a diagnosis after the first visit, after he had that history that he gave you the first time through?

A. Yes, I did.

Q. Okay. So he already had the diagnosis of bronchiolitis obliterans from microwave popcorn. When he followed up with you, he was just giving you more information. It didn't change your diagnosis one wit.

A. Absolutely didn't change it at all.

Q. He had enough exposure previously; right?

A. That's correct.

Q. So when he told you that in 2004 he had stopped regular use, the three bags a day, did subsequently when he said that I still had occasional bags after 4 really surprise you or change your view or somehow alter the history that he'd given you

before in terms of its validity?
A. It didn't change anything about my opinion or what I thought of his information that he provided.
Q. But was it consistent -- I mean, in other words, is it consistent to say I was regularly having this amount up through 2004 and tapered off subsequently?
A. Yes.
Q. And are those kind of alterations something that happens with your patients all the time?
A. Almost every single patient.
Q. All right. As you ask different questions, you get more refined information.
A. Yes. A question, if you just change your wording slightly, it changes the answer a little bit.
Q. Now -- but either way it didn't matter.
A. No.
Q. In your view.
A. No, it didn't change my opinion. It didn't change basically the substance of the information. Whether it was 2004, 2007, 2009, it didn't matter. He had symptoms that started in 2005 and probably earlier. But that's the first time he presented for evaluation which was in the time frame after he reported in 2004 that he had stopped the first time I talked to him.
Q. Now, this relates to this issue of latency somewhat, and I

want to talk -- just ask you your thoughts about a question. I'd like to ask your medical opinion about issue about latency if I could, and then I'm going to be done.

I want to show you a statement and ask you for your medical view of it.

MR. MCCLAIN: Would you put this up, Scott? This is in evidence. It's Exhibit 1325.

Q. It says here Mr. Stults reports shortness of breath in 2009, yet diacetyl was no longer used in microwave popcorn after January of 2007. Thus, there is at least a two-year gap between the end of Mr. Stults' diacetyl exposure and the beginning of the onset of his shortness of breath. Thus, Mr. Stults' shortness of breath did not follow his exposure to diacetyl due to inhaling microwave popcorn vapors. There are no reports of a latency period between the end of diacetyl exposure and the beginning of claimed symptoms of BO for any consumer previously reported, nor is there any latency reported for diacetyl exposure and lung obstruction on spirometry or reported upper respiratory complaints in studies of occupationally exposed workers. The two-year latency between diacetyl exposure ending and shortness of breath and other complaints starting indicates that exposure to some other agent or disease process was responsible for Mr. Stults' BO.

Without reference to who offered that opinion, does this have any medical validity whatsoever?

A. Absolutely not.
Q. Tell the jury why medically this is absolutely wrong.
A. Well, there's several issues with this statement that's made here in number 2. First of all, latency refers to the delay after exposure you develop a disease. So say asbestos, it's decades; with smoking it's decades.

The assumption that's made here is that the patient had absolutely no disease before 2009. That's not correct. The patient clinically was having symptoms and had presented for medical evaluation as far back as 2004. It's in the medical records. So that was two years before the statement in here of January 2007. And most patients have symptoms before -- you know, for some period of time before they actually present for evaluation.

So to say that he suddenly got it out of the blue in 2009 makes no sense whatsoever. From a clinical standpoint, patients don't develop this in a month, a week, even a year. This 60-degree drop in lung function is not something that just happens that quickly. So for that reason it doesn't make any sense.

The other patients who developed symptoms that are listed in this case both were still using microwave popcorn at the time they were diagnosed, so there was no opportunity for them to have a latency.
Q. And in other words, Newkirk and Daughetee are cases you're

familiar with.
A. Yes.
Q. You actually evaluated them.
A. I did.
Q. All right. So go ahead.
A. Yeah. So they both were still using popcorn at the time that they were diagnosed, so there's no way you could say that there was a latency in that because they were still using at the time that they were diagnosed.
Q. So in Mr. Stults's case, is there -- oh. And the other point that I wanted to ask you about is in the microwave popcorn workers, is -- are there instances where some person has stopped exposure many years before they're ever diagnosed?
A. Yes, that's absolutely true.
Q. How many years between exposure in the longest cases that you can think of? And I'm just asking you off the top of your head, so you may not really want to speculate about that. Let me withdraw it.

Is it true that in some cases that you have examined many, many years between the last date they worked, as an example, in the popcorn plant and when they were diagnosed occurs?
A. That's absolutely true. I've seen patients who they were mixers where they were the people that actually made the butter flavoring in these huge 10,000-kilogram vats and they were

exposed every day and they felt really bad working there so they either left the facility or they changed jobs. And years later when this all came out that this was potentially causing their health problems, they presented for evaluation. Well, they hadn't worked there for years, but they clearly had bronchiolitis obliterans related to diacetyl. But they had had intervening years where nobody diagnosed them.

MR. MCCLAIN: That's all I have. Thank you, Dr. Pue.

THE COURT: Mr. Hill, any recross?

REDIRECT EXAMINATION

BY MR. HILL:

Q. You would disagree with the statement that if you stop the exposure you stop getting worse in instances involving microwave popcorn exposure; is that correct?

A. I always have trouble with statements that start off would you disagree. Can -- I have trouble understanding that question.

Q. Sure. If you stop your exposure to diacetyl flavoring in microwave popcorn, does the process by which the -- you allege there is an issue with bronchiolitis obliterans, does that process stop?

A. I've seen several different possibilities occur. And it's probably best described in the workers where we have hundreds and hundreds of people experience. I've seen patients who improve a little bit and then level off and then start going

down later. I've seen patients who just leveled off and didn't keep getting worse. And I've seen others who have continued to march on and their disease gets worse even though they're no longer exposed anymore, they stop working in the facility. So I've seen all three things occur.

Q. So if Dr. Egilman testified that if you stop the exposure then you stop getting worse, you would disagree with that opinion.

MR. MCCLAIN: I object to that, Your Honor. It lacks foundation. That is not the opinion that he offered.

MR. HILL: I can get the transcript if you --

MR. MCCLAIN: I'd like to see it.

MR. HILL: Well, I will get it -- I can't pull it up because it's running time from the court.

BY MR. HILL:

Q. But I think I can ask a hypothetical question and ask if a person testified -- if the jury were to recall that a person testified that if you stop exposure you stop getting worse, you would disagree with that opinion.

A. Can you repeat the question? I want to make sure I'm answering the exact question you're asking me.

Q. I'm trying to make it as simple as possible.

A. I know. I'm just trying to make sure I answer.

Q. If the jury were to recall that a witness in this case testified that if you stopped exposure you stop getting worse,

assuming that testimony has occurred, you would disagree with that testimony.
A. Well, as I stated in my testimony, I have seen patients who some of them have leveled off, but I've seen others who continue to progress without exposure. So I'm not sure how that exactly relates to the previous testimony that was given.
Q. Well, that statement's inconsistent with that previous statement --
MR. MCCLAIN: Well, Your Honor, he's testifying.
MR. HILL: Your Honor, I'm asking him if he believes it's inconsistent.
THE COURT: Well, that wasn't what you said. You said that statement is inconsistent. That's not a question.
MR. HILL: Well, I didn't have a chance to finish because I was interrupted, Your Honor. I was going to say is that statement inconsistent in your opinion? That was going to be the continuation of my question.
A. Can you rephrase the whole question for me so I make sure I answer it correctly?
THE COURT: You didn't start, "Is that statement." You said that statement is inconsistent. You were making a declaration. It wasn't a question.
MR. HILL: And I was going to f -- I'm sorry, Your Honor, but I was going to finish it before I was interrupted.
THE COURT: Okay.

MR. HILL: So I was --

THE COURT: Well, why don't we just start fresh now.

MR. HILL: I think I've asked the question. I think he's answered it. I think everybody understands the point of the question.

THE COURT: Okay.

MR. HILL: Thanks. That's all I have, doctor.

THE COURT: Thank you.

Anything further, Mr. McClain?

MR. MCCLAIN: Nothing further, Judge. And subject to your previous rulings, that's all the evidence that the plaintiff plans to offer in their case in chief subject to tieing up -- we have some documents that apparently I need to offer that were identified, et cetera. But I see no need to delay the process to do that as long as the Court will allow me when the jury's not present to go ahead and do that.

THE COURT: That's fine.

You may step down. Thank you.

Okay. Members of the jury, why don't you take a stretch break.

MR. GUNN: Your Honor?

THE COURT: Yes.

MR. GUNN: We need to set a few things up, and I know you don't like to break until three o'clock.

THE COURT: Oh, that's fine. Would you like to take

the break now?

MR. GUNN: Yes, sir.

THE COURT: That's fine. Is 20 minutes going to be enough?

MR. GUNN: Sure.

THE COURT: Okay. Members of the jury, we'll just convert this to our afternoon recess, so we'll be in recess until five minutes after three. Thank you.

(The jury exited the courtroom.)

(Recess at 2:45 p.m.)

THE COURT: Ready to have the jury brought in? Mr. Gunn, are you ready?

MR. GUNN: We're ready.

THE COURT: Okay. Thank you.

(The jury entered the courtroom.)

THE COURT: Thank you. Please be seated.

Mr. Gunn, you may call your first witness.

Just come up into the middle. Would you raise your right hand, please.

COREEN ROBBINS, DEFENDANTS' WITNESS, SWORN

THE COURT: Thank you. Please be seated in the witness box there. And you can adjust the chair and the microphones so you can speak directly into the microphones. And when you're settled in, would you please tell us your name and spell your last name.

THE WITNESS: Sure. Oh, that's loud. My name is Coreen Robbins. And it's spelled C-o-r-e-e-n, and Robbins is R-o-b-b-i-n-s.

THE COURT: Thank you.

MR. HOLCOMB: Thank you, Judge.

DIRECT EXAMINATION

BY MR. HOLCOMB:

Q. Miss Robbins, would you tell us a little bit about yourself.

A. Sure.

Q. Sure. Where are you from?

A. Well, I currently live in Woodinville, Washington. I work in Redmond, Washington. And I'm originally from Michigan. I grew up, was raised there, and have been living in Washington for the last -- since 1995, how ever many years that is.

Q. Great. And where'd you grow up?

A. I grew up in Michigan. I went to school there initially. I went to Michigan State University for my undergraduate.

Q. And are you married?

A. Yes. I'm married. We celebrated our 30th anniversary back in July, so excited about that.

Q. And do you have any children?

A. I do. I have two girls. They're both in college now, so still being a mom, but they're getting up there.

Q. And what is it that you do?

A. I'm -- as a profession, I'm an industrial hygienist.
Q. And what is, in general terms, an industrial hygienist?
A. Well, I'll give you the technical definition. I don't know if you've heard this before, but I'll be quick about it. The technical definition is industrial hygienist is someone with the training and the background to anticipate, recognize, evaluate, and control hazards in the environment. Usually it's the workplace, but we end up working in different environments. So that's the technical definition.

What that really means to me anyway is that I have the training and the background to go into an environment and look at the things that are there, you know, chemicals, dusts, heat or noise, radiation, that kind of stuff and make an assessment as to whether or not there might be some risk to the people in that environment based on how much is there, what it is, how long they're in there, that type of thing. And so that's the recognition.

And the evaluation is I might do some sampling and test for what's in the environment to see what's there.

And then the control part is where I make a recommendation about how to fix something that needs to be fixed to avoid people being made sick from their exposures.
Q. And have you performed those tests many times?
A. I have done a lot of exposure evaluations, I guess, in my career because I've been doing it for a while.

Q. Okay. And is that something that you've done in industrial setting and a residential setting?
A. Really both. I mean, the industrial stuff is kind of all over the map. But I've also done assessments of indoor environments for different types of chemicals, for mold spores, for other agents that might be there. So I've done both. It's really kind of different than the work environment in terms of what's likely to be there. But the same kind of principles apply in terms of what you know about chemicals and how to sample and things like that, but you do have to make some adjustments.
Q. Okay. And you're certified in this area; correct?
A. Right. I'm a certified industrial hygienist, and really anyone can call themselves an industrial hygienist, but to be certified, you have a certain amount of training. You're supposed to have five years of experience and some type of undergraduate degree that's related. And then you get recommendations, and then you take a -- when I took it, take a two-day test and passed the test sufficiently.
And then you have ongoing stuff. You have ongoing -- what do they call it? -- certification maintenance points, so you keep taking courses, and you have to be practicing in the field. And every five years you report what you're doing, so it's a professional designation.
Q. Okay. Let's back up a little bit. You mentioned

undergrad. Where'd you go to school?
A. I went to Michigan State, and I got a bachelor of science in zoology.
Q. Okay. And why did you choose zoology?
A. Well, my original plan in going to Michigan State and getting that degree was that I wanted to be a veterinarian. That didn't work out too well because I'm allergic to animals, and I thought I could overcome that, but my allergies got worse instead of better.

So I had to go into some other area. And I wanted to do something related to science, but I didn't want to be in a laboratory all by myself all day. So I ended up doing -- getting involved in industrial hygiene because it's got some technical elements, but it also involves people.
Q. Great. And you got a minor in chemistry from Michigan State also; correct?
A. Right. I got a minor in chemistry as a consequence of taking a lot of chemistry in the pre-veterinarian curriculum.
Q. Great. And you have a master's degree; correct?
A. Yeah, I have a master's degree in occupational safety and health.
Q. Okay. And why did you decide to get into occupational safety and health for your master's degree?
A. Well, when I started getting interested in industrial hygiene and I started working at a consulting firm that did

industrial hygiene consulting, I realized that I needed more training. So I decided to go and get the master's degree to do that.

Q. And I see you also have a Ph.D. in environmental health; is that correct?

A. Yeah. It's a doctor of philosophy in environmental health sciences. And so when I went back to graduate school to get my master's degree, I was there for about a year, and then I didn't have any kids then, and so it seemed like a good time. I stuck around and got a Ph.D.

Q. And that was from Johns Hopkins University?

A. Right. I did both the master's degree and the Ph.D. -- we just -- we'd moved to Baltimore because my husband took a job in Washington, D.C., so we were on the east coast because I would have -- I would have done it in Michigan if I'd stayed there.

Q. Now, are you familiar with the term exposure assessment?

A. Well, exposure assessment is what I do. I live it and I breathe it every day, so yeah, I'm familiar with that term.

Q. Now, generally how does an industrial hygienist perform an exposure assessment?

A. Well, there's a couple of steps to it. There's kind of the initial assessment of what's there, you know, kind of what's in the room, what kinds of things are there, how much, who's there, how often they're there.

And then the next step is to figure out if there's

something there that you need to collect information about, collect samples. I mean, typically we're taking air samples, not always. Sometimes we take surface samples, source samples, that kind of thing. But typically we're taking an air sample, and usually we're trying to take a sample in a way that is important to people, so we're trying to take a sample like in a person's breathing zone, that type of thing, and we're taking a sample in a way that mimics how you might be exposed to it.

Q. Now, when you perform these exposure assessments, is that to find out what chemicals are in the area and what you should do about those chemicals?

A. Well, it's -- that's part of it, yeah. I mean, you're trying to find out how much is there and to make a determination as to whether there might be some harm or if there's not really anything to worry about. Really depends on the situation.

Q. Okay. And what is it that you did in this case?

A. Well, couple of things. I mean, the way it started out, I was looking at exposures to consumers to microwave popcorn vapors and in particular looking at the diacetyl component. That's that main butter flavor that is found in all kinds of things, but it's in popcorn.

So I was looking at that and specifically looking at what Mr. Stults said about consuming popcorn and how much he ate and where he ate it and that sort of thing. So I was looking specifically at those exposure issues, and so I did a lot of

work and, as you know, wrote a very long report.

And so what I'm doing today, though, I feel like my job now is to try to explain to you guys what my conclusions and opinions are and kind of the bigger pieces of information that I use to come to those conclusions.

Q. And the conclusions that you came to for this topic, did you make all those within a reasonable degree of scientific certainty?

A. Yes, as much as possible, yes.

Q. Okay. And so when you testify about those conclusions today, those conclusions are to a reasonable degree of scientific certainty?

A. Yes.

Q. Okay. Now, just generally how'd you perform this exposure assessment for Mr. Stults?

A. Well, we don't have any sampling data from Mr. Stults's kitchen. So I don't have anything to base it on from that. So the way that I would have to do it is by looking at other situations where people are popping popcorn, look for data in the literature.

I guess the first thing I do is I do my initial assessment, and I think about how much is there, what is it, how -- is it likely to be something that's highly toxic or not. So I do an initial assessment. And then with this I looked at the scientific studies that are out there.

Q. Did you review depositions in the case?
A. Oh. Yes, I did.
Q. Okay. And did you review the NIOSH plant studies?
A. I tried to review everything that was out there on the subject, and so there are a bunch of investigations that NIOSH did, and I looked at all of those. And some of those they turned into what we call peer-reviewed literature publications, and so I've read all of those. I've looked at all of those. It's a lot of information.
Q. Well, tell us your opinion. Is there a risk of consumer exposure to diacetyl through microwave popcorn consumption?
A. I think that the consumer exposure to diacetyl from popping microwave popcorn is insignificant. I don't think that there's enough to be important, and I don't think that it puts anybody at any risk of harm to have diacetyl in the environment when they're popping popcorn.
Q. Well, let's talk about your training and your experience in this field. How did that play into your risk assessment in this case?
A. Well, I think that the three things that I looked at to try to figure out what was going on is I looked -- I thought about my -- my industrial hygiene training and experience and the kinds of things I would look at to figure out what his exposure was like.
So that -- what I did is I thought about what are we

talking about here? We're talking about a bag of popcorn. We're talking about a kitchen. And so I make an initial assessment. So, for example, if I were in a factory or I'm in a commercial building and there's some kind of chemical issue, the first thing I do is go in and I try to look at how much was there and where the people were and how long they were there. And when I look at popcorn and I look at consumers, there's not much to start with. So there's not much chemical there. So that was the first thing that I did.

Q. Okay. So let's -- excuse me. So you also talked about the available literature. Now, we've heard something that people have referred to as the Aspen study.

MR. HOLCOMB: Tammy, could you pull up Plaintiffs' Exhibit 306? This should be a A exhibit.

A. Yes, I can see that. Okay.

Q. You have a screen right there in front of you.

A. Okay. Thank you.

Q. Now, have you reviewed this study?

A. Yes, more than once.

Q. Okay. And just generally tell the jury who performed this study and what exactly was measured.

A. Okay. Well, the folks that performed this were -- I think they were chemists and kind of food scientist types, and what they were doing is they were looking at microwave popcorn and they were -- they put the popcorn in the microwave in a -- well,

they put the popcorn in a chamber inside the microwave, and they looked at what types of chemicals came off of the popcorn. Everything's made of chemicals, so, right, something's gotta come off. And they were looking also -- they looked at how much diacetyl would have come off from popcorn.

Q. Okay.

MR. HOLCOMB: And, Tammy, can you go to page 4, please.

Q. And this is one of the conclusions from this report; is that right?

A. Right. That's one of the conclusions from the original report, yes.

Q. And it reads if one assumes that a reasonable exposure breathing space or microwave vent exhaustion dilution is a factor of 1,000, the emissions expanded into 1 cubic meter, all the concentrations would be diluted by a factor of 1,000. That means the parts per million by volume reported above would become parts per billion by volume.

A. Right.

Q. Now, was this finding important in your analysis?

A. Well, this is -- it's obvious to me when I read the report that that's what's going to happen. But what's important about that is that they -- when they did the study, they collected everything in a three-liter container. And then that's artificial because when you pop popcorn, you're not containing

everything in three liters. It's expanding out into the space around you. So once you take that material that they've collected in the three liters and put it into a cubic meter, it's going to dilute it because it's diluted by the surrounding environment. That's just the way it works.

Q. Okay. And you brought a demonstrative here --

A. I did.

Q. -- to show the jury exactly what three liters looks like and what exactly was measured.

MR. HOLCOMB: May I approach?

THE COURT: You may.

A. This is the volleyball. So this was going to go on the garage sale, but I salvaged it. This is about eight inches in diameter. And if it were a little over seven inches in diameter, it would contain about three liters, so this is the kind of volume that they were containing the popcorn stuff in in order to come up with the concentrations that they got. So the issue with this is that if you take this --

THE WITNESS: Can I go over here with this and explain it?

THE COURT: You can, but we're going to equip you with a lavaliere mike so that everybody can hear you okay. And my law clerk Matthew will assist you in that regard.

THE WITNESS: All right. Thank you.

BY MR. HOLCOMB:

Q. Would you like to step down and --
A. Would it be okay if I do?
Q. Sure.
A. Okay. So -- got too many microphones. So if you -- so you collect everything in here, and that gives you a concentration that, you know, unless you do that in your kitchen it's not going to stay there, right, because it's going to expand out. And that's kind of what you'd expect because you're at home and you make popcorn. Before you know it, somebody down the hall can smell it, right, because it's dissipating out into the space.

So this is a cubic meter. And so if you were to take the amount that's in here and it dissipates into this space, you're reducing the concentration by about 10,000 times. It's much, much less.

Q. Okay. And so what does the size of this study or the amount of space that was studied tell you about consumer exposure, what they breathe when the consumer opens a bag of microwave popcorn?
A. That's a really good point and that's -- like I said, to me it was obvious from this, but if you're not thinking about it, it wouldn't be. What this means is this is not something that you would be exposed to. In other words, the concentrations that they were reporting are artificially high really. It's not something that you would experience.

Q. And so just tell the jury what happens to the vapors when the bag of microwave popcorn is opened.
A. Well, I've popped a lot of popcorn, and perhaps you have too. But when you open a bag of popcorn, it's -- if you open it immediately after popping, it's very hot. So when you open the bag, the hot air and the steam is escaping, so it's going to go up because hot air goes up, so it's going to go out and dissipate into the room.
Q. Okay. And you're aware that there was an addendum also to the Aspen report that came a few years later?
A. Yes. And I just wanted to back up and just say one more thing because if you wanted this to be what you had for your exposure, if you wanted that to be the case for any length of time, you kind of have to have it like right here, and that's not what happened. So that was why I wanted to use the ball.
Q. So what's the take-away from the original Aspen study with respect to consumers?
A. I think the take-away -- what I got from it was that not surprisingly that there's not much there when they pop a bag of popcorn.
Q. Now -- the addendum, please. Now, we've shown here Plaintiffs' Exhibit 1383. It's an A exhibit. Now, this is the addendum to the Aspen study; correct?
A. Yes.
Q. And you've reviewed this?

A. I have.

MR. HOLCOMB: Tammy, can you go to the next page, please?

Q. Now, what's your understanding of how the addendum came about?

A. I'm not sure.

Q. Okay.

A. I think maybe there was -- there was some question about --

MR. MCCLAIN: Your Honor, the witness said she's not sure.

THE WITNESS: Okay.

MR. HOLCOMB: She's allowed to explain her answer, Your Honor.

THE COURT: Well, do you have any firsthand knowledge?

THE WITNESS: I don't. I wasn't involved in the study, so I wouldn't have firsthand knowledge.

BY MR. HOLCOMB:

Q. Well, you've reviewed the study, have you not?

A. Yes.

Q. Okay. And what we have blown up here is one of the conclusions from the addendum; is that right?

A. Yes.

Q. And if you look at the last sentence here, it says based upon -- it says the concentrations reported in the original tables were calculated as PPMV, parts per million volume,

assuming that the emitted compounds were contained in a 3-liter volume at 90 degrees Celsius. Based upon this method of expressing the data in the original report, the concentrations listed in that report are probably not relevant for hazard identification or risk assessment for either workers or consumers. To aid ConAgra Foods in their evaluation of these data, this report -- this addendum has been prepared at their request.

MR. MCCLAIN: Your Honor, could I voir dire the witness briefly on this question?

THE COURT: On which question?

MR. MCCLAIN: I object. There's no question. Counsel's just reading this. But if she's allowed to answer a question, I'd like to voir dire her.

THE COURT: Well, let's see what the question is, and then I'll rule on your request to voir dire the witness.

BY MR. HOLCOMB:

Q. How did the conclusion here in the addendum report factor into your exposure analysis for Mr. Stults?

THE COURT: Would you still like to voir dire the witness?

MR. MCCLAIN: No.

THE COURT: Okay.

A. Well, this -- their conclusions are essentially what I would have expected from the kind of situation that they have,

so it generally comports with a low amount of material and a very low concentration in the environment due to popping popcorn.

Q. And was that consistent with what your initial evaluation was when you started looking at consumer risk?

A. Yes, it's consistent with what I thought initially. I mean, I'm a scientist by training, so I'm always asking questions, and this was a way to ask the question of myself are my -- is my initial hypothesis a reasonable one.

Q. And you're also aware that the EPA conducted a study and it's sometimes referred to as the Rosati study?

A. Yes, I'm familiar with that study as well.

Q. And that's something you reviewed in this case in doing the exposure assessment?

A. Yes, yes, I reviewed this.

Q. Okay. And just tell us generally who conducted this experiment and what were they looking for here?

A. Well, this experiment was conducted by scientists at the Environmental Protection Agency. And they were looking at what kind of components come off of popcorn and -- when it's being microwaved, and it's similar to the Aspen study. It's not identical. They did some things differently.

Q. Okay.

A. But it's a similar kind of study.

Q. And in terms of measurement, what did they do differently

than the Aspen study?
A. Well, in the Aspen study you remember they used a small -- like a jar inside the microwave and put the popcorn in it. What the guys did in the EPA lab, they have a slightly different setup, and they actually contain the whole microwave oven, and they sampled the air that was coming out of the microwave and the air that was coming out of the bag of popcorn, so it's a little bit -- actually it's a lot different, but it's the same general idea. They're basically trapping the vapors as they come out because if you didn't trap them, you probably wouldn't just -- you wouldn't detect them because it's too fleeting. The stuff gets out into the environment. The concentration goes down rapidly, so you can't really -- you can't really collect enough to detect it with the typical methods that we have.
Q. And just generally what did the Rosati study conclude with whether -- with regard, excuse me, as to whether the study could be -- could be used to associate risk to consumers or to estimate exposure data to consumers?
A. Well, I think with this study and the other one they were pretty careful to say they were looking at emissions, they were looking about how much comes out of the bag, how much is coming from the bag of popcorn. They weren't trying to do the study to say, oh, this is what a consumer would be exposed to because you can't do that with this kind of study.
Q. So looking at the Aspen study, the addendum to the Aspen

study, and the Rosati study, what -- after reviewing all that, what was your take-away about potential risk to consumers?

A. Well, my --

THE COURT: Just a second. I want to see the lawyers at sidebar.

(At sidebar on the record.)

THE COURT: First of all, you can't put an expert on and just parade through these studies. She said she reviewed them. She never once said she relied on them. So just because somebody reviewed -- I mean, you could get a parrot from a pet shop and have them repeat this stuff. So you need to lay a much better foundation if you're going to keep doing it.

MR. HOLCOMB: Yes, Your Honor.

(The sidebar was concluded.)

THE COURT: You may proceed. Thank you.

MR. HOLCOMB: Thanks, Judge.

BY MR. HOLCOMB:

Q. Now, the Aspen study, the addendum to the Aspen study, and the Rosati study, are those -- did you rely on those studies in coming to your opinions in this case?

A. Yes, in part, yes.

Q. And literature such as that, is that something that industrial hygienists rely upon in coming to an exposure assessment?

A. Yes, that's something we would look at to get some idea of

what could be happening in an environment.
Q. Okay. And after reviewing all of those studies, what was your take-away from those studies with respect to Mr. Stults's potential exposure to diacetyl through microwave popcorn?
A. Well, I think what the studies told me is that when you're popping popcorn you're not emitting much of anything. You're not emitting much diacetyl so that while you can't really quantify exactly how much is there, there's just not very much, so that's the conclusion.
Q. Okay. Now, earlier you testified that you also looked at some of the published NIOSH studies from the microwave popcorn plants?
A. Yes.
Q. Okay. And is that the type of infor -- did you rely upon that to come to your conclusions in this case?
A. Yes. You know, I just thought of something that I should have said about what they did in their studies, though. Can I tell you that now, or I can't? Okay.
Q. Which study would you like to discuss, doctor?
A. Well, actually probably the Aspen study.
Q. Okay. And what would you like to tell the jury?
A. Well, you'd asked me what they were doing in the studies, what they were looking for.
MR. MCCLAIN: Your Honor, I've been -- I don't know -- I don't understand what we're doing. I've never seen -- I

object.

THE COURT: Okay.

MR. MCCLAIN: There's no question and answer going on between the witness and the -- and counsel.

THE COURT: Well, objection's overruled. You may answer.

A. Well, what I wanted to say was the other thing that they were looking at, they weren't just looking at what was coming out. At the time I think -- and they even say it in the text -- that one of the things that they're looking for was what's coming out of these products because I think at the time people were kind of wondering if there was some kind of Frankenstein molecule that was created, you know, in the process. And they were -- what they found was that the things that came out were what you'd expect. There wasn't any strange things that were made as a consequence of the microwaving of the popcorn. And that was a question at the time that they had to answer.

Q. Okay.

A. And it's important.

Q. Thank you, doctor. Now, going back to the NIOSH studies that you reviewed, you relied upon those in your conclusions in this case.

A. Yes.

Q. And is that the type of information that industrial hygienists use to do an exposure assessment?

A. Definitely. I mean, it's the National Institute For Occupational Safety and Health, so we definitely -- the industrial hygienists would look to them for that kind of information.

Q. Now, there have been some talk about the quality control rooms at these microwave popcorn plants. Have you reviewed generally the data and the conclusions from those studies with respect to the quality control department?

A. Right. I've looked at -- well, I mentioned before that I looked at the studies and I very carefully tried to look at all the information that was there concerning workers in general but also looking at the quality control workers who were popping bags of popcorn because that's -- well, it's not a good representation of what people do at home, but it is popping popcorn, and it is a similar task at least.

Q. Okay. And did you review how many bags of microwave popcorn these quality control workers generally would be popping per shift?

A. Yes. They were popping -- well, it depended on the plant, and it depended on the shift length but anywhere from -- some plants were 50 bags of popcorn a day, some were 75, some were as high as 130 bags a day.

Q. Now, the -- you're aware in this case that Mr. Stults claims that he would pop around two or three bags of microwave popcorn per day?

A. I'm aware that Mr. Stults was popping popcorn and doing so on some kind of a basis. I'm not sure how much popcorn he was popping on a regular basis. I'm kind of confused on that. But he definitely was popping popcorn.
Q. Okay. And the difference there between Mr. Stults's claimed exposure or claimed consumption and what the quality control workers were doing, did you try to compare those in coming to your opinion in this case?
A. Well, that's -- yeah. I mean, that's what I would do is I would say, well, what are the quality control workers doing, they're popping a lot of bags of popcorn, and that's going to be qualitatively and quantitatively different than somebody popping a couple bags at home, so that was why I looked at it.
Q. Now, these quality control workers, did you review some of the medical information from these NIOSH studies of the lung function testing that was being completed in the plants?
A. I looked at -- I mean, I looked generally at the studies, so yeah, I'm aware of what they did was they looked at -- they looked at concentrations in the environment, and they also looked at -- they did spirometry which is -- I don't know if you guys have heard about it, but you blow into a tube, and it's a test of lung function, and they were testing for that. They were testing for -- well, what they can look at with that is they can look at obstruction and they can look at restriction in the lung function. It's -- they're not looking at whether or

not the people have bronchiolitis obliterans. It's not the same test so . . .

MR. MCCLAIN: Your Honor, may -- I have an objection. This is not a medical doctor.

THE COURT: Over -- you're right about that. Overruled, though.

BY MR. HOLCOMB:

Q. Doctor, we'll just move along from that. Now, when you looked at the QC data from the NIOSH plants, did you look at what the data reflected regarding the jobs that those workers had in the plants?

A. Yes. I think that, you know, what I'm looking for as an industrial hygienist if I'm trying to figure out what somebody's exposure is and I don't have sample data, I look at the next closest thing, and I'm looking at the workers here because I don't have anything really for consumers outside of Rosati and Aspen. So I looked at what they were doing to see if it's similar to what we do at home. Well, the popcorn popper guys are popping a lot of popcorn, so they're really not similar in that respect.

So in industrial hygiene we have a thing called similar exposure groups, so like if somebody's doing a particular job and they have a certain concentration, I think we can reasonably say that the next day somebody else doing the same job would have a similar kind of exposure.

So -- but when you look at the people popping popcorn, that work isn't like popping popcorn at home because they're popping so much more.

The other part of that is is that they're doing other things besides popping popcorn in a lot of these plants. They're going -- in some instances they're going into the slurry rooms, and they're collecting some of the bulk flavoring material and the hot oil and taking it into the QC room, and they're around these other activities. So their exposures are going to be different, even more different because of those kinds of things happening in the environment that they're in.

Q. Now, you mentioned the slurry room. What's the slurry room?

A. It's -- well, in the studies that were done, they would call the slurry room the area where they would mix up big containers of hot oil and butter flavoring, and then they would usually mechanically pipe that stuff to the packaging lines where they'd actually package up the popcorn.

Q. Now, after reviewing the NIOSH studies and the -- and doing your initial assessment and then looking at some of the literature that was out there, did you -- what was your take-away about in general the exposures that a consumer would be subject to from popping microwave popcorn?

A. Based on the -- my analysis from my training and experience based on what I saw in the studies that are available out there,

there's not a risk of a substantial exposure, and there's no risk of harm to consumers popping popcorn at home from diacetyl.

Q. All right. Now, you also performed an experiment in this case; is that correct?

A. Yes.

Q. Okay. And can you tell us what exactly you did and why you did it.

A. What I did and why I did it. Okay. Well, what I did in my experiment was I popped bags of Movie Theater Butter popcorn. And I opened them, and I tried to put my nose in the bag to see if it could be done or if it would be too hot. And I found it was -- at least for me in the first minute I couldn't do that because it was too hot.

But then I also wanted to know what was the temperature of the air coming out of the bag because we know something about the temperature of the air in the bag when it's being popped. It's pretty hot. But what is it when it's coming out of the bag?

And so I did an experiment where I popped popcorn, and we have another chemist in our group, and we used something called a thermocouple. It's like a thermometer, but it's a couple of wires, and so we popped the popcorn. We'd immediately open the bag and then hold the wires of this thermometer thing at the opening to see what the temperature profile was like. And we did that. You know, we replicated it and --

Q. And why did you want to know what the temperature at the opening of the bag was?
A. I wanted to know -- I did the study because I wanted to know if it was possible to do that because -- in part because as I understand it from Mr. Stults's testimony, he was doing that. He was holding the bag up to his nose right after he popped it, and so I wanted to know if it was possible to do it. Based on my experiments and my experience, I'd say that that's not possible. It's kind of self-limiting. You really can't stick your nose right in it.
Q. Okay. And you've created a little demonstrative here -- for -- to assist the jury in understanding what the results were.
A. Right.
Q. Now, you can touch the screen in front of you, and it will --
THE COURT: If you have a stylus there, it works a little bit better, but you can use your finger.
THE WITNESS: Okay. Is this it?
BY MR. HOLCOMB:
Q. Okay. And this --
A. Oops. I didn't want to give it arrows. How do you erase those?
THE COURT: Here's what happens. When you just tap it, then it leaves an arrow. But if you kind of draw with it,

then you can circle --

THE WITNESS: Wow.

THE COURT: -- whatever part you want.

THE WITNESS: That's very cool. All right.

BY MR. HOLCOMB:

Q. Okay. And so explain to the jury what you found here when you measured the temperature at the opening of the bag.

A. So this is a really simple experiment, but basically what we did is this is when we opened the bag here and held the -- held the thermocouple at the opening of the bag. And so then what you see is as the thermocouple heats up, there's a certain amount of lag time for this instrument. It's actually kind of hard to measure how hot the air is, surprisingly. But -- so there's a little bit of lag time.

So as the thing heats up, it reflects the increasing temperature of the probe, and then as it's cooling down, because we're not continuing to heat the popcorn, right, we just open it, and then it starts to cool off, and it goes down. So the reality of it is that it probably starts hotter. In other words, there's kind of a lag time. So it's probably hotter here, and then it probably decays a little bit faster, but this gives you a general idea of what the temperatures would be. And potentially it would be higher, but, you know, this is what you get with the thermocouple.

So what this tells you is is that when you get -- in

this temperature range is it's going to be -- it's going to be burning your nose, and that's consistent with what I found when I tried to put my nose in the bag.

Q. And I see there's red on -- there's some red readings on the chart, and it says increased burn risk. Will you explain that to the jury?

A. Right. Well, that just means that -- and this is for water. I don't think I have it for steam. It's the temperature at which you're more likely to get a burn in a very short period of time. And then the orange is where it's starting to get better, and then the green is the safe range for water, so that's what they recommend for your water temperature in your home if you have little kids so they don't get scalded.

Q. Now, taking into account the lag time that you talked about, how long did it take for the temperature at the opening of the bag to fall to an area where there would be no increased burn risk?

A. It takes about -- about 80 seconds, between 60 and 80 seconds I think.

Q. And how did this experiment factor into your opinion that consumers or that Mr. Stults wasn't at an increased risk of exposure to diacetyl though microwave popcorn?

A. Well, like I said, I wanted to know -- I mean, when we talk about exposures, one of the things that you think about, if you have a source, how close can you get to it because the closer

that you can get to it, then the more you might be able to get into your lungs; right?

So the question here is could you get that close to it or would it be impossible because if you can't get that close to it, you can't have the same -- you're not going to have an exposure from the stuff coming right out of the bag. And, in fact, when you open it, the reality of it is is that the hot steam is going to carry the volatiles out and up, and they're going to go out and dissipate into the room.

Q. Now, did you look at the reported dimensions of Mr. Stults's kitchen in coming to your opinions?

A. Well --

Q. And is that something that you would rely upon as an industrial hygienist?

A. Well, one of the things you can do if you have sampling data and you have, you know, how much is used and how long it's used and how big the environment is and what the ventilation is like, then you can start talking about what concentrations might be like in a certain scenario.

So if a bigger -- if you're in a bigger space, there's more dilution volume. Like in this room, if we popped a bag of popcorn in here, it would -- you know, the vapors would go out into the room, and they would become very dilute pretty quickly because you have nice airflow. And if you have a smaller room, you know, it's going to be harder for it to become dilute as

fast, especially if you don't have any ventilation. So the size of the room, the size of the kitchen is going to affect how much is going to be there and for how long it's going to be there.

Q. And what did you find when you reviewed -- or what was the size of Mr. Stults's kitchen?

A. Well, based on his deposition testimony, my understanding is that it's around 700 square feet. So that's a pretty good-sized space.

Q. Okay. And how did that factor -- the size of the kitchen exactly, the 700 square feet, factor into your opinions regarding his potential exposure?

A. Well, I think if you look at the Rosati study and the Aspen study and you look at how much is emitted from a bag and you say, well, if we emit this much into a smaller kitchen, we're going to have a concentration of -- I think I calculated an 8 by 10 by 12 kitchen -- 8 parts per billion or something like that. If you then go to a kitchen that's bigger than that like three times that size which is essentially what I think his kitchen was, then the concentration would be on the order of I think two or three parts per billion. So it reduces the amount -- or it reduces the overall concentration dramatically.

Q. Now, switching gears just a little bit, industrial hygienist -- as an industrial hygienist, are you aware of the Hazard Communication Standard?

A. Yeah, I'm aware of the Hazard Communication Standard. It's

something that is -- has been promulgated by OSHA which is the Occupational Safety and Health Administration. And they're like the important regulatory body for industrial hygienists because that's -- that's who we look at. So they created MSDS -- or they created HazCom standard to -- do you want me to tell them what it is? I guess I kind of overstated the question there.

Q. No, that's fine.

A. Sorry.

MR. MCCLAIN: Your Honor, this is a new undisclosed opinion unless counsel can show me what -- where he's going with this. Maybe counsel can show me something in the report that talks about MSDS sheets. Fine.

THE COURT: You may proceed, Mr. Holcomb. Thank you.

A. Is this water for me, or is that somebody else's?

Q. It is. It is.

A. Thanks. A little thirsty.

Q. Now, we just discussed a little bit the Hazard Communication Standard. Let's back up. Does an industrial hygienist use the Hazard Communication Standard?

A. Yes, the Hazard Communication Standard was designed to -- it requires employers to develop information sheets for their employees essentially. So if you're working with a chemical or a material, a dust or something like that, that could -- you could be exposed to in your workplace, they're supposed to provide you with these things that have information about what

it is and what kinds of things to look out for and what to do. So that was passed by OSHA in 1983 for manufacturing and then in 1986 for general industry, so then it applied to everybody.

Q. So the Hazard Communication Standard, that involves MSDSs?

A. Right. The information sheets I'm talking about, they're typically referred to as MSDSs, material safety data sheets, so you don't want to say MSDS sheets because that's redundant. But anyway, that's what they are, and that was -- that's what they're designed to do.

Q. Okay. And who are -- who is intended to be informed about the hazards of chemicals through the MSDS sheets?

A. Well, part of the regulation is that the employer is supposed to spend some time training their workers on the availability of this information and what it means. So that's part of it.

Q. Does it apply to consumers?

A. It does not apply to consumers at all.

Q. Now, just backing up a little bit, will you just generally describe the work you've done since you finished your Ph.D. at Johns Hopkins.

A. Wow, that's backing up a ways. Well, when I was finishing my work, I was having -- I was -- my kids were really young. They were babies. So I was working part time and in industrial hygiene consulting, and I've been doing that ever since.

Q. Okay. And where do you work today?

A. I work at a company called Veritox in Redmond, Washington.
Q. Okay. And what is Veritox? What do they do?
A. Veritox is a consulting firm that specializes in issues related to industrial hygiene, exposure science which is what I do, also toxicology, and we have some engineers that do failure analysis, things that break and that sort of thing.
Q. Okay. Through your work at Veritox, who have you performed exposure assessments for generally?
A. Well, I would say that I have a range of people that I've worked with. I work with individuals, homeowners. I work with insurance agents, schools, government agencies. I work for attorneys.
Q. Okay. And have you worked for plaintiffs as well as defendants?
A. I have on occasion worked for plaintiff attorneys, yes.
Q. And have you worked for the federal government before?
A. Well, not exactly. I mean, I've worked for attorneys in the Department of Justice. I've worked on cases that they were involved in, but I wasn't an employee of the government so . . .
Q. Right.
A. To be clear.
Q. And what work did you do for the federal government in that respect?
A. Well, the work that I've done for them has been related to claims of exposure to, in some cases, mold, and I've also looked

at the claimed exposure to formaldehyde in the FEMA trailers.
Q. Now, do you work as a consultant in every case that you're asked to review?
A. No.
Q. And why not?
A. Well, the reality of it is is that anybody can call me, and I'm really willing to work for anybody that wants to hire me as long as they're willing to live with my opinion. So sometimes I'll get a call and somebody will say, well, we want you to work on this project, and what do you know about it, and if they give me some of the -- if they give me enough information and I have some details, sometimes I can say, well, this is what I think my opinions are going to be about this exposure, i.e., I think it's a problem or I don't think it's a problem. And sometimes people don't want to hire me after they find out what my opinions are, and that's just how it works. I mean, it's -- it's --

MR. HOLCOMB: All right. That's all I have. Thank you, doctor.

THE COURT: Thank you, Mr. Holcomb.

Mr. McClain, after we take a stretch break, you can cross-examine.

Everybody including Dr. Robbins can take a stretch break.

MR. MCCLAIN: Your Honor, can we have a sidebar briefly?

THE COURT: Okay.

(At sidebar on the record.)

MR. MCCLAIN: Judge, I'm asking to be allowed to do a demonstration in the courtroom. I'd like to pop a bag of popcorn and demonstrate that what the witness has just testified to is an absolute, complete falsehood. I did it three times last night. You can put your nose immediately in the bag. The cornerstone of her opinion is he didn't do -- essentially calling him a liar.

And so I know it's rather unorthodox to do it, but I've got a microwave here ready to go. It's on a dolly. I've got the popcorn. It's diacetyl free, so we're not putting anyone at risk. But I wanted to seek the Court's permission before I try to do it.

THE COURT: And who are you going to have put their nose in the bag?

MR. MCCLAIN: Me.

THE COURT: Okay. And what's the defense position?

MR. HOLCOMB: I object. I mean, this is the first time I'm hearing about it, and I made sure to show Mr. McClain what I was using well beforehand, so this is kind of an ambush actually. I mean, it's not like I wasn't able to tell her about it because I wouldn't have. But at least I would have known it's coming, and, you know, this is just a little more prejudicial than probative. I mean, she was just talking about

her own experience, and she acknowledged that --

THE COURT: She's talking about an experiment she allegedly did.

MR. HOLCOMB: The experiment was putting the thermometer in the bag. What she was saying was at least from my perspective when I was doing it I couldn't --

THE COURT: Yeah. Well, she said it was too hot --

MR. HOLCOMB: For herself.

THE COURT: Right.

MR. HOLCOMB: Right.

THE COURT: I'll allow it.

MR. MCCLAIN: Thanks.

(The sidebar was concluded.)

THE COURT: Sorry about that. You can stretch for a little bit.

Can you begin your cross now?

MR. MCCLAIN: I can. Sure.

THE COURT: Thank you. Please be seated.

CROSS-EXAMINATION

BY MR. MCCLAIN:

Q. Good afternoon, Ms. Robbins. You and I have never met before, have we?

A. I don't think so.

Q. I'm Ken McClain. And I'm here representing the Stults family. Let me see if I've got this right. You authored a

supplemental opinion in this case on this experiment you did; right?
A. I'm not sure what you're referring to.
Q. You authored a letter dated October 2 of 2013, regarding this so-called experiment, didn't you?
A. I think so, yeah.
Q. Okay. Let's look at it if we can to see the exact language that you claimed you were going to be expressing here. This was to a different lawyer, and we're going to get back to why this was to a different lawyer. But this was a lawyer for Symrise Corporation, not IFF. Am I right?
A. I at the time was working with Mr. Kawala, yes.
Q. All right. You weren't employed by IFF at this time.
A. I think that there was some type of retention agreement that they had or they were jointly retaining me or something. I don't really know.
Q. You hadn't done any calculations about IFF exposures at this point, had you?
A. I didn't do anything specific to them, no.
Q. Okay. Now, here's what you said in this letter that you sent. Due to the steam and intense heat of the air, approximately 190 to 205 Fahrenheit, coming out of the opening of a bag of freshly popped popcorn, it's not possible to inhale the vapors at the bag opening until nearly one minute has passed. Right?

A. That's what I wrote.
Q. Therefore, it defies data and common sense that Mr. Stults would be able to inhale vapors directly out of the bag of microwave popcorn right after popping it. In addition, since it's not possible to inhale vapors at the bag opening, readings of diacetyl at the bag opening right after popping, FTIR samples collected by NIOSH relied upon by Dr. Egilman cannot represent measurements of human exposure to diacetyl upon opening a bag of popcorn. True? That's what you said?
A. That's what I typed.
Q. That's what you claimed; right?
A. That's what I just said.
Q. And that's what you just swore under oath.
A. Yeah.
Q. Now, first of all, the intent of this is to cast doubt on Mr. Stults's truthfulness, isn't it?
MR. HOLCOMB: Objection, 403.
THE COURT: Overruled. You may answer.
A. That wasn't what I was thinking, no.
Q. When you say it defies data and common sense that Mr. Stults would be able to inhale vapors directly out of the bag, you're not claiming that he's not telling the truth?
A. You know, I never questioned his truthfulness. I was just trying to understand how he consumed the popcorn. And he had different ways that he said that he held the bag. This was one

of them, and I think I -- I kind of ruled it out as being possible based on that. So it was really an attempt on my part to understand what could have happened.

Q. So you're claiming that it does not happen, it cannot happen.

A. Well, I don't think so, no.

Q. Okay. Let's roll the videotape that the jury's seen. Did you know that, in fact, the way that this was advertised, it was advertised that people smell it as it directly comes out of the bag?

(Video was played in open court.)

Q. Did you know that that's the way it's advertised?

A. I don't think I've ever seen that commercial.

Q. No. I mean, I guess not. But that's the way it's advertised, that you breathe it right under your nose, and you claim that's impossible.

A. Well, the experiment that I did was related to having your nose right up to the bag, and she doesn't have it right up against her nose so --

Q. You said it's too hot to get your nose in it for over one minute; right?

A. That's what I found in my study, yes.

Q. Okay. Well, I brought a microwave oven in. Let's try it.

MR. MCCLAIN: Can you bring it in?

Q. And just so that you know, we're going to time it for a

minute and see how far I can get my nose in the bag before we reach one minute.

MR. MCCLAIN: And just for the record, Judge, this is new popcorn. It's allegedly without diacetyl in it. At least I hope.

A. Is it Movie Theater Butter?

Q. Absolutely. I bought Movie Theater Butter, and we'll tell the jury about that aspect of what you did too or at least what you claim you did.

Q. This is Movie Theater Butter?

A. That's what it looks like.

Q. That's what you claim you used; right?

A. That is what I used -- well, not that box, but, I mean, I tried to get the most buttery popcorn I could find.

Q. Well, that's what I wonder about because that's really not what you did. The Movie Theater Butter flavor is not what Mr. Stults ate, is it?

A. I think he ate a variety of popcorn, so I'm not sure. And that wasn't --

Q. But this -- this stuff has the butter separate from the microwave popcorn, doesn't it?

A. That's not what I used.

Q. Well, that's Movie Theater Butter. You claim that's what you used, Movie Theater Butter.

A. That's pour-over. I didn't use pour-over. Sorry. But the

stuff that I used had the butter and everything inside the bag. There was no pour-over.

Q. Well, I bought --

MR. HOLCOMB: Your Honor, I'm going to object to this now since it's not the same product that she used in her experiment.

A. Not even close.

Q. It's Movie Theater Butter.

A. I used -- I didn't use pour-over. I would've said so.

MR. HOLCOMB: Your Honor, can I get a ruling before Mr. McClain continues?

THE COURT: Well, he hasn't done the experiment yet, so he's entitled to question the witness. Then -- your objection was just a little premature. So we'll take it up.

MR. HOLCOMB: Thank you, Your Honor.

THE COURT: Okay. Thank you.

BY MR. MCCLAIN:

Q. Is the name of this popcorn the same, Movie Theater Butter, that you claim you used?

A. It's -- well, the stuff that I used is Movie Theater Butter. It didn't have the little packet on the front. I didn't notice that before, so it's not the same.

MR. MCCLAIN: Your Honor, may I pop the popcorn?

MR. HOLCOMB: Your Honor, I'm going to renew my objection. This is not the same product that she used in the

experiment by her own testimony.

THE COURT: I'm going to sustain the objection.

MR. HOLCOMB: Thank you.

BY MR. MCCLAIN:

Q. Well, let's use a different bag of popcorn. Is it your testimony that it was just this Movie Theater Butter that does this, that gets so hot, or is it all microwave popcorn that you're testifying gets hot like you claim is impossible to put your nose in?

A. I didn't test more than the one kind, so, I mean, except that I pop popcorn on my own at home and it's darn hot so . . .

Q. Well, are you -- are you claiming that only this type that you used, this Movie Theater Butter which is different from the Movie Theater Butter that I bought last night, gets so hot or all microwave popcorn gets too hot to put your nose in?

A. I'm going to guess that probably most of it does get too hot to put your nose in. Now, there might be a kind out there that doesn't have much butter in it or something --

THE COURT: You know, I'm going to strike that last answer and tell the jury to disregard it because in federal court we don't guess at opinions.

THE WITNESS: Okay. You're right. Sorry about that.

THE COURT: So I'll give you an opportunity to rephrase it if you'd like.

A. What's the question again? I apologize. I've gotten

carried away there.
Q. Would it change your opinion if, in fact, I popped the popcorn and I'm able to breathe the popcorn just as Mr. Stults says? Does that modify your opinion so you will tell this jury that, in fact, that may be true?
A. Yeah. I mean, if you can -- if somebody can do that, then that would be new data for me because the data that I have so far tells me that you can't do it, at least for a minute.
MR. MCCLAIN: May I try, Judge, to give the opinion under Rule 702, additional information that she can consider while seated before the jury?
THE WITNESS: Except that's not the same popcorn.
MR. HOLCOMB: And, Your Honor, I would just renew my objection.
MR. MCCLAIN: Well, then just we strike the entire testimony because what she tested is not what Mr. Stults ate. I mean, if it's completely different and it's completely unique to that brand of popcorn, that has nothing to do with this case.
THE COURT: Well, first of all, we don't know if it's completely different or unique because nobody's given an opinion about that. So I didn't understand your request or objection, so can you . . .
MR. MCCLAIN: My request is to test -- I've got other brands of microwave popcorn, any one she wants me to choose, any type with butter on it in the bag, outside the bag. I don't

care. I've tried them all. I will be -- I'm prepared to try any one of them that she chooses here in the courtroom. So whichever one she thinks is comparable to the one she used, I'm happy to do it. I'm challenging the veracity of the testimony.

MR. HOLCOMB: And, Your Honor, I would renew my objection. This is not the same product that she tested in her experiment.

THE COURT: Yeah, but it's not the same product that he used either because the -- even if it was the same brand, the -- it's diacetyl free, so it's obviously not the same product so . . .

MR. HOLCOMB: Your Honor, this product's --

THE COURT: It doesn't have to be identical. It has to be reasonably similar. And so you can continue to try and lay a foundation with the witness, and then I'll make -- and then you can renew your objection, Mr. Holcomb, and then I'll rule on the experiment. I bought some microwave popcorn today, but it was marshmallow, so probably wouldn't work.

BY MR. MCCLAIN:

Q. Wait a minute. Maybe this solves our problem. Okay. This is the Movie Theater Butter, and it doesn't have the packet. Is this the same one you used?

A. It says --

Q. Movie Theater Butter.

A. It's still got the packet, though.

Q. No, it doesn't. Without the pour-over.
A. Okay.
Q. Is this what you used?
A. No, not exactly. I don't --
Q. What do you mean? This is the kind, Movie Theater Butter without the pour-over. You said that's what you used.
A. Can I look at it?
MR. HOLCOMB: Your Honor, I'm just going to object to Mr. McClain's tone with the witness.
THE COURT: Overruled, but it's getting close to being a little badgering.
A. This is a pop-up bowl, so I don't really understand it. The stuff I did, do you have it in a bag, like a normal --
Q. Yeah, it's here in a bag.
A. But that's the pour-over. You need the microwave popcorn that's --
THE COURT: Aren't you holding that in your hand? No, the other one.
THE WITNESS: It's a different container. I'm sorry. It's a different container.
THE COURT: And I'm sorry. I'm getting a little confused here. What's different about the container?
THE WITNESS: Well, I don't know. It says it's a pop-up bowl. I don't know what that is. I presume it's not like a normal bag. It must be different when you open it so --

I gotta look with my glasses on. Sorry. It looks to me like it's different packaging, so I don't really know. It could be that with this type of packaging that you could put your nose in it. I don't really know.

Q. This is the same kind of packaging you used; right?

A. Which?

Q. This one, and there is butter flavor in this bag. You can just pour additional butter on the movie flavor.

A. You know, I don't know. I think that to me is sort of like the main difference between those two is the fact that it looks like to me anyway that most of the butter's in the packet that you pour on it. It's not in there, so it's not going to get -- turn to vapor. And this is just a different package. I'm -- it's not the same.

Q. And you don't know what you tested, whether it had any relationship to what Mr. Stults breathed or tested or used at all, do you?

A. I think it was a pretty typical bag of popcorn. I mean --

Q. Not this one.

A. But with the butter and stuff inside it. It wasn't on the outside.

Q. There's butter inside this one too.

THE COURT: Well --

MR. MCCLAIN: There's butter in this.

THE COURT: Now you're testifying.

MR. MCCLAIN: I'm sorry. There is.

THE COURT: Here's what we're going to do. It's been a long day for everybody. And I'm going to send the jury home.

MR. MCCLAIN: Okay.

THE COURT: And then we're going to talk about whether or not we're going to pop popcorn in the courtroom.

MR. MCCLAIN: Okay.

THE COURT: And if we are, we'll do it tomorrow morning.

MR. MCCLAIN: Thanks.

THE COURT: You could have at least done it during those boring videotaped depositions. We could have served it to the jurors. Just kidding you.

MR. MCCLAIN: I was thinking about that.

THE COURT: Members of the jury, that's going to conclude our testimony for today.

Remember it's really important to keep an open mind till you've heard all of the evidence in the case, had a chance to hear the closing arguments of the lawyers and receive my final instruction. Don't talk about this case among yourselves. Don't let anybody else talk to you about it. And let's see. Tomorrow's Friday; right? I've lost track of days this week. So tomorrow we'll be going 8:30 to 2:30. But we'll take an hour break for lunch, 12 to noon. And then we'll probably take a shorter break in the afternoon. And then we'll take our usual

20-minute break right around ten o'clock in the morning. Yes.

JUROR AVRILL: You said 12 to noon.

THE COURT: Oh, I'm sorry. We're going to go -- yeah, we're gonna -- okay. Let's back up. I appreciate that. We're going to go 8:30 to 2:30. That's going to be our trial day. We're going to take a lunch break of just an hour, so that would be approximately 12 to 1, not 12 to noon. That would be a really short lunch break. I appreciate that. Thank you for pointing that out. I stand corrected. So we'll take an hour lunch break from 12 to noon (sic). We'll probably take a short 10-minute recess about 1:15 or so, and then we'll take our usual morning 20-minute recess. Thank you very much. Thanks.

(The jury exited the courtroom.)

THE COURT: Okay. Please be seated.

Doctor, you can step down, and you can remain in the courtroom if you'd like.

THE WITNESS: Okay. Should I just leave the --

THE COURT: Yeah, you can leave everything there if you like, if you have anything you need to take. But I think you have the microphone, so we're going to retrieve that.

MR. MCCLAIN: I would ask that she be excused while we discuss this matter.

THE COURT: Okay. Okay. Dr. Robbins, we're actually going to excuse you.

MR. MCCLAIN: And please emphasize the need not to

discuss anything.

THE COURT: Yep. And we're under the sequestration because she's been tendered for cross, and I just trust the lawyers to follow that.

So getting back to the Johnny Cochrane if it doesn't fit you must acquit moment of the courtroom here on the popcorn.

MR. MCCLAIN: Judge, this is a very skilled witness who testifies regularly for asbestos companies, so I wondered about this claim that she had in the -- and so we tested -- we've tested about ten of these different brands or different types of Orville Redenbacher butter-flavor popcorn. I used the one that she claimed she used. She's very skilled in knowing how she can potentially thwart cross-examination.

THE COURT: Well --

MR. MCCLAIN: But this is the only kind that's available, period. This is Movie Theater Butter flavor. And the -- so okay. All right. We'll use a different type of butter fl -- this is not what he used anyway.

THE COURT: Well, I understand that.

MR. MCCLAIN: And so it either has to be stricken.

THE COURT: But --

MR. MCCLAIN: Either has --

THE COURT: No. Time-out here. Now, I'm just a ordinary consumer of popcorn. I do different brands. I've never seen the pour-over, what somebody -- I think you might

have called it a pour-over.

MR. MCCLAIN: I've never either. I bought it off the shelf yesterday when we read that she used Orville Redenbacher's Movie Theater Butter flavor, and this is -- this is what was available.

THE COURT: Yeah. No. I understand that. But it appears that that could be significantly different than what she used and --

MR. GUNN: Can I show you this picture and you'll see what she was talking about?

THE COURT: Sure.

MR. MCCLAIN: That's not this.

THE COURT: That's the other thing. That's the popcorn bowl thing?

MR. MCCLAIN: Yeah, that's pop-up bowl.

THE COURT: So here's what I'm suggesting. Maybe you already have it in the box. Maybe you need to go out and get other samples. But there must be something that is closer in similarity to what she claims she used for her experiment.

MR. MCCLAIN: Sure. We can do that. But can I just pop this for you? You can smell the butter in the bag. It's just additional butter that you pour over the top that you heat up like you do in the movie theater, but there is butter in this. You can smell it all over the room just by popping it. And so the suggestion that there's no butter flavor in this

is -- would not be correct. There is, and it says so on the bag. But I'll do whatever you say.

THE COURT: Mr. McClain, why do you want to try and argue with me that this extra butter that's a pour-over or something --

MR. MCCLAIN: I don't.

THE COURT: -- is similar to what she claimed when I've had hundreds if not thousands of microwave bags of popcorn, and I've never seen pour-over? So obviously there are plenty of bags that one can purchase without the pour-over stuff that would seem to be more similar to what she's claiming she used in the experiment.

MR. MCCLAIN: Okay. I'll do that.

THE COURT: Now -- well, that's all I'll say at some point -- at this point. Mr. Holcomb.

MR. HOLCOMB: I'll just renew my objection that we had at the sidebar. I'm fine with Mr. McClain pulling up the chart, talking to her about the results, establishing it wasn't Orville Redenbacher butter, that it was a different brand and talking about the instrument that she used. I mean, this wasn't she threw it in there --

THE COURT: But she did more than an instrument. She claims it was too hot for her to --

MR. HOLCOMB: I think that was just an anecdotal deal.

THE COURT: Well, it wasn't anecdotal. It's what

calls into question the whole credibility of the plaintiff. So you call it anecdotal. What are you talking about anecdotal?

MR. HOLCOMB: The way I understand it, the purpose of the experiment was to see what --

THE COURT: Well, then you shouldn't have had her testify about her anecdotal experiences that it was too hot. I mean, you know, it's the same degree -- if you look at her chart, it was the same temperature -- matter of fact, it was lower at its peak than McDonald's coffee.

MR. HOLCOMB: And I --

THE COURT: And the testimony in the McDonald's case was even at 40 degrees lower -- that was the industry standard -- people consumed it all the time, and her chart said it was unsafe. So I don't believe that chart for a second. But that's subject to cross-examination. But you're the one that had her testify that you couldn't sniff it even after a minute. And I think if you looked at her chart, it was like 200 and some seconds before it became safe. Well, you know what? Based on my experience, that's ridiculous.

MR. HOLCOMB: Right.

THE COURT: Because I've eaten popcorn and sniffed it well, you know, within 30 seconds and not had a problem. So it just defies common experience. And it strikes me as incredulous testimony. But it's going to be for the jury to decide.

MR. HOLCOMB: And I understand, Judge. I mean, in

this experiment she used a thermocouple which is something that chemists or industrial hygienists use.

THE COURT: I know that a thermocouple is.

MR. HOLCOMB: And I'm fine with Mr. McClain getting into that with her, but now we're not even talking about her experiment.

THE COURT: Well, then you shouldn't have had her testify to what she personally did unrelated to the thermocouple. You're the one that created this, not Mr. McClain and not me. It was your examination of the witness.

Now, there was nothing improper about that examination. But for you to turn around and say somehow I need to truncate or limit his examination because your witness testified to that doesn't seem like fair play to me.

MR. HOLCOMB: I understand, Your Honor.

THE COURT: Okay.

MR. HOLCOMB: I was just renewing my objection.

THE COURT: If it was just the chart and the thermocouple, then we wouldn't be into the experiment. The only thing that justifies the experiment in my view is her anecdotal testimony that it was unsafe at any speed to sniff it.

MR. HOLCOMB: Thank you, Your Honor. I'll just renew my objection.

THE COURT: Okay. If there's any other record you want to make, you make it now or make it in the morning.

MR. HOLCOMB: Thank you.

THE COURT: Okay. Thank you, Mr. Holcomb.

MR. MCCLAIN: I have my -- I have my assignment.

THE COURT: Okay. Why don't we meet at 8 just to see if there are new rounds of objections to what you're going to do.

MR. MCCLAIN: Okay.

THE COURT: Mr. Gunn, did you want to be heard? I'll waive the tag team wrestling rule. Mr. Wright?

MR. WRIGHT: Different issue. Do we need to do Rule 50 this afternoon or in the morning?

THE COURT: If you're prepared to do it now, we could do it now. Who's going to be making it?

MR. WRIGHT: Well, I'm going to be making most of it. Mr. Holcomb may be handling a couple of the issues we're going to raise that will be brief.

THE COURT: Okay. Are you prepared to do it now?

MR. WRIGHT: Yeah, I can make it now.

THE COURT: Okay. You may proceed, Mr. Wright. Thank you.

MR. WRIGHT: Your Honor, as I'm thinking through it walking up here, if it's all right with the Court, the amount of time it's going to take is short. Would it be -- if we do it in the morning, would that be --

THE COURT: How much time do you think it will take?

MR. WRIGHT: Ten minutes. I can sure do it now but . . .

THE COURT: How about this? How about make it now. If you think of anything you want to add to it, I'll let you supplement it in the morning. If you think you're going to be more than just a couple minutes for either -- for any of the lawyers who are going to speak on it, then we'll just start a little earlier.

MR. WRIGHT: That's fair.

THE COURT: But I want you to make all the record you want to make on it.

MR. WRIGHT: Sure. I appreciate it.

THE COURT: So you can have overnight if you want to supplement.

MR. WRIGHT: Thank you. I appreciate it.

THE COURT: Thank you.

MR. WRIGHT: Your Honor, for purposes of our record and our motion under Rule 50 for directed verdict, the issue that I'm primarily here to talk about -- as I said, Mr. Holcomb will address an issue or two momentarily as well -- is the concept of breach of implied warranty as the theory of the case.

All of the evidence that's been produced by the plaintiffs in this case relates to formulations, the recipe, the decision to include diacetyl in the microwave popcorn butter flavoring. There is no evidence regarding a malfunction of the

butter or the microwave popcorn. All of the allegations that have been asserted, all of the evidence that's been presented, all of the expert testimony presented has been in the form of formulations, did they -- should they have included it or shouldn't they and when did they know that it was being included in the product as opp -- and that it may have been harmful and should they have then removed it or warned or what not.

The cases where -- we've danced around this Prentis issue, and we recognize the Court's position. But I do want to alert the Court to a couple of quotes. One comes from Prentis itself. One comes from Kenkel versus Stanley Works which is a Michigan supreme -- or Court of Appeals case from 2003 comparing negligent design to implied warranty.

And the Kenkel case in talking about what a breach of warranty claim means, it says a breach of warranty claim tests the fitness of the product and requires that the plaintiff prove a defect attributable to the manufacturer and causal connection between that defect and the injury or damage of which he complains. This is the part that is important. Customarily, this defect can be found regardless of the amount of care utilized by the manufacturer. On the other hand, a negligence claim tests the defendant's conduct instead of the product to determine whether it was reasonable under the circumstances.

And Prentis says -- has a similar quote and uses the term negligence focuses on the defendant's conduct while

warranty focuses on the product irrespective of the defendant's conduct.

And there's a -- it would appear here that all of the evidence that's been presented by the plaintiffs in this case focuses on the conduct of the defendant, should they or should they have not included diacetyl in the formulation of their butter-flavoring recipe.

The cases that exist where there's -- you know, the Michigan courts have talked about implied warranty and design defect are separate things, not necessarily merged, and they allow them -- allow parties to submit implied warranty claims. All of those involved a malfunction of a part -- of the product at issue regardless of design. In Kenkel it was a sliding door at a grocery store or a Rite Aid or something to that effect. The Sundberg decision was a ladder. The Bouverette decision was a control print panel or breaker. And Norton which is a federal decision, Norton was a toaster.

And whereas in Prentis the issue was the design of the product which resulted in the conclusion that there was essentially a merger, you can't submit implied warranty when the issue isn't a malfunction regardless of the conduct but rather is the result of the conduct of the defendant.

We submit that this case is much more like Prentis because it's not a malfunction. It performed exactly as it was designed to in this case. The question in the complaint is the

design itself which makes it like Prentis and, therefore, makes it so that the implied warranty theory cannot survive. They have not put on any evidence that the product, the butter flavoring, the microwave popcorn, malfunctioned in any form or fashion.

And then I would also note, Your Honor, that in -- that Michigan's tort reform statutes are what should govern this case because -- and it talks about production, and it defines production to include design and formulation within its definition. That's MCL 600.2945. The Michigan statute says that all cases involving production involving the design or formulation must be tried under the risk utility analysis for design defect or negligence, not under im -- I don't think it says not under implied warranty. That's my editorial comment. But I think that that's the implication is that it must be tried under that risk utility analysis. 600.2945 and 2946 are the two statutes that are most important from that perspective.

And then stepping aside to -- let me finish that. I apologize. Because of those cases, because of the requirement of a malfunction of the product to get to the implied warranty as opposed to the conduct of the maker of the product in deciding to include it in its design, there is no evidence of that malfunction. There's no evidence of an implied warranty problem.

And furthermore, there's no -- all of the evidence

that's been presented, none of it would get past a finding as a matter of law that this was even remotely foreseeable. They can only point to one or two or three persons other than Mr. Stults who could be considered to have -- even possibly have bronchiolitis obliterans from consumption of microwave popcorn. And I think there's evidence as to the hundreds of thousands if not millions of people that consume microwave popcorn and the amount of microwave popcorn consumed each year let alone over the period of --

THE COURT: Well, but it's not the consumption. That's not the --

MR. WRIGHT: It's the inhalation.

THE COURT: Right.

MR. WRIGHT: I understand.

THE COURT: Yeah. There's nothing in the record about how many people inhale bags of popcorn.

MR. WRIGHT: I think that that's true. What's in the record is -- and to that point, for it to be foreseeable, I think the plaintiff would have needed to put on evidence that would make it foreseeable that people were going to inhale the popcorn at levels that Mr. Stults was doing. I don't think that evidence is there either. And so --

THE COURT: I think the ad shows that it was reasonably foreseeable.

MR. WRIGHT: And that ad was not an ad by us.

THE COURT: I understand. I understand.

MR. WRIGHT: That was an ad by somebody other than us that we didn't have any control over.

THE COURT: It's reasonably foreseeable when you serve something in a bag that people are going to open the bag and sniff it. That's reasonably foreseeable in my judgment. But anyway, keep going.

MR. WRIGHT: And I appreciate the Court's point. I don't think anybody necessarily disputes that -- everybody likes the smell of butter flavor on popcorn. The real question is was it foreseeable that people were going to sniff it or inhale it at the levels Mr. Stults claims to have done so, and that's the point as to the foreseeability under this theory.

I would then switch, Your Honor, to the concept of statute of limitations. I know the Court has ruled on statute of limitations. I think we heard evidence at the end of Dr. Pue's depo -- or testimony today that Mr. Stults was having symptoms related to this condition as early as 2004 or 5 as I recall the testimony. And we believe that we should be entitled to a directed verdict on the concept of statute of limitations.

And to the extent the Court elects not to grant such a motion, we think the testimony of Dr. Pue certainly was sufficient to -- for the Court to reconsider its ruling and insert back into or into the instructions a question on the statute of limitations and the discovery rule based upon

symptoms that he was experiencing and seeing physicians and so forth prior to the time that the statute of limitations period would run as it relates to a discovery rule.

If I could consult with co-counsel for just a moment, Your Honor.

THE COURT: You may.

MR. WRIGHT: Thank you.

THE COURT: Take your time.

MR. WRIGHT: If it's all right, Your Honor, I'll turn over my -- the arguments to Mr. Holcomb. Thank you.

THE COURT: Thank you. Thank you, Mr. Wright.

Mr. Holcomb?

MR. HOLCOMB: Yes, Your Honor. My --

THE COURT: Mr. Wright, before you go back there, let me ask you a question about the very first argument you made. Isn't that kind of -- I mean, I'm not trying to mischaracterize it. But isn't that just rehashing the summary judgment ruling?

MR. WRIGHT: Well --

THE COURT: On the --

MR. WRIGHT: It is.

THE COURT: Okay. Yeah, and you're free to do that. Yeah.

MR. WRIGHT: I don't think there's anything --

THE COURT: There's really nothing new.

MR. WRIGHT: I don't think there's anything new other

than what we now know is their specification of what was wrong --

THE COURT: Yes.

MR. WRIGHT: -- is a formulation, and the evidence presented relates exclusively to formulation. And so if nothing further -- if nothing more, the record is more fully developed as relates to what was a summary judgment motion.

They've had their chance to put on their evidence. The Court said there could be a fact question or there is a fact question on these issues. And as a result, they've gotten to put on their evidence, and their evidence doesn't get to implied warranty. Their evidence only gets to the concept of design defect.

And so yes, it's the summary judgment motion just with a more complete record and at a different stage of the process.

THE COURT: Okay. Thank you very much for that.

MR. HOLCOMB: Yes, Your Honor.

THE COURT: Mr. Holcomb.

MR. HOLCOMB: Yes, Your Honor. Thanks. I'll try to be brief.

THE COURT: You don't need to be brief. You take all the time you want.

MR. HOLCOMB: Thank you. I'm also speaking about the breach of implied warranty claim. And mine has to do really with the second element that the Court has enumerated in the

breach of -- in instruction 7 at -- saying that the Stultses also contend the diacetyl-free butter flavorings which did not emit fumes that were -- which did not emit fumes that were potentially hazardous to breathe were available for use in microwave popcorn.

Under -- and a lot of this, Your Honor, was in our objections to the jury instructions that were passed back and forth with the Court just so the record's clear. Under MCL 600.2946(2), it requires a showing that when the product leaves the manufacturer's control a practical and technically feasible alternative production practice was available that would have prevented the harm without significantly impairing the usefulness or desirability of the product. And that's what the focus of my part of the motion is here.

The only -- the plaintiffs -- excuse me if I'm wrong, but they started the case with the deposition testimony of Karen Alexander. It was read here in the courtroom. There was no video. And Miss Alexander was a flavorist for BBA and for IFF. And her testimony was it was possible for BBA into the early 1990s to make a butter flavoring without diacetyl in it.

What the plaintiffs have not put -- shown any evidence of is the second part of that 600.2946, that the diacetyl-free flavoring would not have significantly impaired the desirability of the product. There has been no testimony in this case, no evidence thus far in this case, about whether microwave popcorn

manufacturers would have accepted a diacetyl-free butter flavoring or whether the customers of these microwave popcorn manufacturers would have bought it. So that's the focus of my motion here.

Next I will -- and really it's the evidence that during the time frame that IFF and BBA supplied butter flavoring to ConAgra which the evidence has shown and I think it's stipulated -- it's a pretrial stipulation that it was some time in 1992 until 2005. So they haven't shown that there was -- that it was feasible during that time period economically and -- to the microwave popcorn manufacturer.

The next would be on instruction number 8. And we're dealing here with the permanent loss of a vital bodily function and recklessness, and the focus of my motion here will be the recklessness standard.

The evidence thus far has shown that prior to the Jasper outbreak IFF and BBA provided MSDSs to microwave popcorn manufacturers. And I think it was in Mr. Carroll's deposition that NI -- or that IFF and BBA worked with NIOSH following learning about the Jasper outbreak.

Also in this case we're dealing with a consumer. And so we haven't really had any testimony in my view or in IFF's view thus far showing a recklessness as to consumer exposure to microwave popcorn. We've had a lot of talk about plants and quality control workers, but we haven't really had the

connection here between the consumer, the alleged reckless behavior of IFF and BBA respect to consumer exposure.

The evidence shows that Con -- that ConAgra produced the microwave popcorn that is at issue in this case. IFF was a butter-flavoring manufacturer.

Let me just look over my notes, and that may be it.

THE COURT: That's fine. Take your time.

MR. HOLCOMB: Your Honor, one other area would be the past medical expenses of Mr. Stults. I don't believe that those have been entered into the record. It's my understanding that Mr. Ward did not consider that in his testimony, the past medical expenses. So we would move for a directed verdict on that issue of the past medical expenses. Thank you.

THE COURT: Thank you, Mr. Holcomb.

MR. WRIGHT: Can I jump off of the bar and tag team and come back?

THE COURT: Sure. Sure. But you have to tag him.

MR. WRIGHT: Got it.

THE COURT: There you go. Now you're official.

MR. WRIGHT: Just two quick things, Your Honor. Mr. Holcomb -- we had three. Mr. Holcomb covered the one. One is insufficient evidence on causation and proximate cause. And we think you can rule as a matter of law that they haven't provided sufficient evidence as to causation for the injuries and damages claimed relative to the microwave popcorn.

And then under the implied warranty theory, the plaintiffs have not shown the level of diacetyl to which a consumer would be exposed would render the product not reasonably fit. And so we'd move for directed verdict on the implied warranty theory as it's submitted presently.

THE COURT: But in the light most favorable to the plaintiff which is what I have to view the evidence, Dr. Egilman's testimony shoots that down, doesn't it, if one were to believe it?

MR. WRIGHT: If one were to believe it, I think that it's conceivable that it would. I'm not sure that evidence was sufficiently credible. And, as such, we make the objection, and we raise the motion, Your Honor.

THE COURT: Right. That's fine.

MR. WRIGHT: Thank you.

THE COURT: Anything else you'd like to add?

MR. WRIGHT: I don't think we've got anything else today. If there's something we have in the morning, it will be very brief.

THE COURT: Okay. That's fine.

MR. WRIGHT: Thank you for your time, Your Honor.

THE COURT: Thank you. And if it's going to be a little bit longer, just let me know, and we'll just start a few minutes earlier.

MR. WRIGHT: Will do.

THE COURT: That's fine.

MR. WRIGHT: Thank you.

THE COURT: Okay. Thank you.

Mr. McClain?

MR. MCCLAIN: Judge, counsel for IFF continue to confuse the legal theories under Michigan law, one with another, and mix and match the requirements of one --

THE COURT: That's what they're claiming you're doing.

MR. MCCLAIN: One -- I understand they do. But I went to the University of Michigan law school. I know a little bit about Michigan law in regard to the development of products liability theories.

THE COURT: Well, that's good because I got rejected by them.

MR. MCCLAIN: And many fine lawyers did, and I was fortunate to be able to go there. And one of the things that we studied there was the development of strict liability theories across the country.

And you'll remember, Judge, that there were two competing theories of liability as the doctrine developed. One developed in California in the -- Justice Traynor of the California Supreme Court, very eloquent judge who wrote very eloquently about the issue and kind of laid the foundation for 402A liability.

Michigan was on a different track still trying to find

some way to hold product manufacturers liable without fault. They adopted the idea of strict liability in tort which was an oxymoron, but that was the direction that they went as opposed to 402A liability.

They took the defective idea of an implied warranty and just grafted it on to tort saying that if it's not fit for its intended purpose, then there is liability for that product without adopting the other elements of defect and unreasonable danger and the other 402A requirements. And really as a historical anomaly and out of pride that the state developed in its own jurisprudence, they stayed with that concept and have never adopted 402A liability.

As in all jurisdictions in which strict liability has been adopted, however, they allowed negligence to remain a parallel concept which was up to the plaintiff to decide whether they were proceeding under negligence or implied warranty, just like in Iowa you can proceed under strict liability or negligence.

Now, when the legislature amended the law having not enough lawyers in the legislature in Michigan at the time, they did not include implied warranty. And so the courts, understanding the harshness of the amendment that was adopted and the purpose for it to deny plaintiffs their day in court by adopting a draconian discovery rule in regard to those claims, preserved implied warranty because it was not included in the

draconian work -- tort li -- tort reform statute adopted. And the Michigan courts, as we have demonstrated, have been diligent at maintaining that distinction and maintaining a discovery rule in regard to implied warranty.

Now, we have alleged a breach of implied warranty. If a product will make you sick simply by using it, that is, it emits dangerous vapors when you use it, that product is not fit or at least the jury could find that it's not fit for its normal purpose, to be used as a consumer product. And so there's no problem with our theory. There's a problem with the product.

Likewise, a product which can be manufactured without the offending ingredient is, in fact, unfit by definition.

So the implied warranty theory has been maintained as a separate theory without all of the overlay that negligence has been -- has been saddled with in Michigan by the grace of the courts. And by the grace of the courts we still had a discovery rule which the court determined applied in this case. And our implied warranty theory is valid I think, and we have submitted evidence on both of those claims in this court.

In regard to statute of limitations issues, the suggestion being made is is that somehow he could have discovered this earlier. I think that if you were to rule that being a live issue at this point in time, you would have to direct a verdict because everyone he went to -- and they're claiming they're relying on those doctors -- said he didn't have

any disease related to diacetyl until Dr. Pue did in 2011. And we filed suit almost immediately thereafter. So there's no contested issue on statute of limitations under the discovery rule in this case.

In regard to causation, of course, I would point out not only Dr. Egilman -- or proximate cause, Dr. Egilman, Dr. Parmet, Dr. Pue all have testified that, in fact, his disease was caused from the unfitness of this product. And the damages that we have testified directly flow from his inability to do work and for his future medical care.

In regard to his past medical expenses, we agree we didn't submit any. We're not planning to submit them. And so if you want to grant that, it's not part of our submission in terms of his past medical care.

So with that in mind, Judge, we would ask you to deny the motion.

THE COURT: Let me ask -- so what part of the instructions you think no longer are applicable with regard -- would it be on page 23, past economic damages?

MR. MCCLAIN: No. It's the past medical expenses.

THE COURT: Let's see.

MR. MCCLAIN: There's a line for that somewhere.

THE COURT: Where is that?

MR. MCCLAIN: It's under economic damages, past reasonable expenses of necessary medical care, treatment.

THE COURT: Yeah. What page are you on?

MR. MCCLAIN: I'm on page 2 of the verdict form.

THE COURT: Okay. There's actually nothing in the instructions that specifically has to be stricken?

MR. WRIGHT: Page 25.

THE COURT: Page 25?

MR. WRIGHT: I believe that's right. Oh, wait. I'm mistaken. I believe it's on bottom of page 23, Your Honor, assuming my --

THE COURT: Yeah, that's actually I think what I said, past economic damages. Now, is there -- so the first bullet point, reasonable expenses for necessary medical care, treatment, and services, that bullet point is out. But the rest of the bullet points remain in?

MR. MCCLAIN: Yes.

THE COURT: So it's just that one bullet point and then the corresponding line on the verdict form?

MR. MCCLAIN: No, because the corresponding line on the verdict form includes I think -- is it? Is it blank? No, the line on the verdict form is blank as I filled it out yesterday, so we're not planning to present evidence on that.

THE COURT: But it would be -- it would be on page 2 under (A), small (i), and then the very first line, past reasonable expenses of necessary medical care, treatment, and services.

MR. MCCLAIN: Correct.

MR. WRIGHT: Your Honor, we can -- and this wasn't raised a moment ago. But I don't recall that -- I'm on page 24 now of the bullet points regarding past economic damages. It carries over. There's a bullet point for reasonable expenses that have been required as a result of David's injury. If there's been evidence of that, I don't remember it.

THE COURT: What would it be?

MR. WRIGHT: But --

MR. MCCLAIN: I don't think we submitted any, no.

MR. WRIGHT: So maybe do we agree then that lost wages would be the only economic damage that would --

MR. MCCLAIN: That's being claimed.

THE COURT: And then on the corresponding portion of the verdict form . . .

MR. WRIGHT: Honestly, Your Honor, I'm not sure -- I'm just looking --

THE COURT: Well, I think it's --

MR. WRIGHT: It's probably in that same one. It would be the services.

THE COURT: How about step 2, damages, (A), small (i), economic damages, fifth line down, past reasonable expenses that have been required?

MR. WRIGHT: You're correct, Your Honor.

THE COURT: That would go out; right?

MR. MCCLAIN: That's right.

THE COURT: So it'd be the first line and then second, third, fourth, and then the fifth line. Those we'll just have the jury cross out. And does anybody have an objection if I do that before -- well, let me ask you this. When would you prefer that I do that?

MR. WRIGHT: I think it's probably appropriate to do it the first opportunity in the morning just if for no other reason than we don't forget.

THE COURT: That's a really good point. Have any problem with that?

MR. MCCLAIN: No.

MR. WRIGHT: I thought for sure you were going to grant the rest of our motions and you wouldn't even need to worry about it, Judge.

THE COURT: Well, but I have to have the night to see what you come up with for your supplementations so . . .

MR. WRIGHT: There you go.

MR. MCCLAIN: Are you guys really calling Bates? You're not really calling him, are you?

THE COURT: Just want to make sure I'm marking the places correctly. Okay. I've got it. I'll reserve ruling till I hear any more in the morning, and then I'll rule; okay?

MR. WRIGHT: Thank you, Your Honor.

THE COURT: Okay. Thank you. Anything else we need

to take up now?

MR. MCCLAIN: No. Brain trust in the back, anything we need to take up? We're good? Okay. Thank you.

MR. GUNN: I'll see you in the morning.

THE COURT: See you in the morning.

(The foregoing trial was adjourned at 4:42 p.m.)

CERTIFICATE

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

S/Shelly Semmler
Shelly Semmler, RMR, CRR

12-16-14
Date

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